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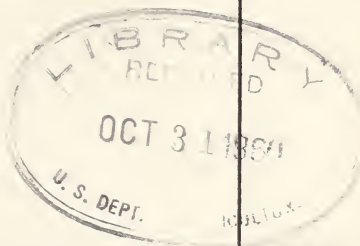
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POSSIBLE METHODS OF IMPROVING THE
PARITY FORMULA;

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REPORT

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PURSUANT TO

SECTION 602 OF THE AGRICULTURAL ACT
OF 1956



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POSSIBLE METHODS OF IMPROVING THE PARITY FORMULA

I. CONCLUSIONS AND RECOMMENDATIONS

This report is made pursuant to section 602 of the Agricultural Act of 1956 which provides that:

* * * The Secretary shall make a thorough study of possible methods of improving the parity formula and report thereon, with specific recommendations, including drafts of necessary legislation to carry out such recommendations, to Congress not later than January 31, 1957.

This section summarizes conclusions and recommendations while the following sections discuss the evolution of the present parity-price formula, consider the uses and limitations of parity calculations, and examine selected alternative proposals for revising or improving the parity formula.

THE CURRENT PARITY FORMULA

The current parity formula is based on a commodity purchasing-power concept which compares prices received by farmers with prices paid by farmers (including also allowances for interest and taxes per acre of farm real estate and wage rates, for hired farm labor). Specifically, it indicates the prices which would give farm products generally the same per unit purchasing power in terms of goods and services used in both production and farm family living as prevailed in the base period 1910-14. Also, in accordance with provisions of the Agricultural Act of 1948, prices for the various farm commodities are so adjusted or "modernized" as to maintain the same intercommodity relationships as prevailed during the most recent 10-year period.

This latter modification was a notable advance over the previous formula which derived parity prices for most of the major farm products directly from the 1910-14 base average. At the same time, since the new or modernized parity prices for some farm commodities were lower than the old parities, the Congress provided for the gradual transition from the old to new parities in such cases. Current legislation, however, does provide for the eventual use of a single consistent formula for calculating all parity prices. By determining intercommodity relationships from actual prices received in the most recent 10-year period, the current formula does recognize that such relationships change over time as the result of changes in costs and methods of farm production and changes in demand.

The comparison of prices received versus prices paid within the farm or other sectors of the economy is a standard economic technique. These price data would still be collected and the indexes of prices received and prices paid by farmers would still be published even if they were not incorporated in the parity formula. But it

should not be inferred from this that such comparisons alone provide fair or satisfactory standards for fixing or supporting either farm prices or income; they do not.

There is no single formula, or series of formulas for that matter, that can satisfactorily be used as the sole criterion for price or income actions. The very divergence between prices received for a commodity and prices paid by producers will indicate that there have been shifts in the complex economic forces governing production, prices, and consumption. *Parity comparisons only call attention to the changes which are occurring; by themselves they neither indicate why a change has occurred nor what should be done about it.*

In the Agricultural Adjustment Act of 1933 which first gave legislative recognition to the purchasing-power comparisons which are now the heart of the parity concept, the congressional direction was to move farm prices toward the relative level prevailing in the base years 1910-14 gradually "and at as rapid a rate as is deemed feasible." In short, this act simply took over the analytical techniques of the economists and index number makers with the full understanding that a great deal of discretion and latitude had to be used in developing programs, taking into consideration not only what was desirable but also what was feasible in terms of the economic effects, financial costs, and administrative difficulties involved.

This is still the situation.

Parity prices do not indicate what can be sold at satisfactory prices nor that competition can be satisfactorily met, either at home or abroad. Parity prices do not indicate how profitable farm production may or may not be, how much or how little farmers will produce. Nor do parity calculations, however made, automatically assure for farmers satisfactory or equitable incomes, either individually or collectively. Programs which are economically sound, administratively feasible, and financially supportable simply do not flow from fixed formula calculations. Purchasing power calculations are basically nothing more than analytical devices for measuring changes or trends. Calling such calculations "parity" tells nothing more nor less than what was in the statistics and indexes from which the calculations were started.

WHAT KIND OF FORMULA?

In considering possible improvement in the parity formula, an essential first step is to decide what basic kind or class of formula might be most appropriate or useful. The three basic formulas which underlie most suggestions for parity calculations are:

(a) *General purchasing-power base-period comparisons.*—Such calculations yield a direct measure of changes in the per unit purchasing power of particular commodities in terms of a fixed bill of goods used by farmers generally, both from year to year and also as between the current year and whatever base period may be assigned.

(b) *Specific commodity indexes or cost estimates.*—The formulas falling in this class provide either for a modified purchasing-power concept in which prices for the particular commodity are directly related to an index of prices paid for goods and services used in producing the commodity or go further toward endeavoring actually to estimate specific costs of production.

(c) *Prices or returns to yield specified incomes.*—Such calculations start with some desired rates of returns or per capita income level. Total net incomes are then derived by applying these rates or desired per capita incomes to estimated farm investment and labor requirements or farm population. Supplemental estimates or calculations must then be made as to production expenses, distribution of income as among different commodities or classes of farms and actual or desired levels of production if prices for specific commodities are to be developed. Estimates of income of farm people from nonfarm sources may also be involved.

Taking into account the advantages and disadvantages of these various formulas, *the Department concludes that the use of the current general commodity purchasing-power concept should be continued.* That is, the parity formula should continue to indicate prices which would give farm commodities generally a per unit purchasing power in terms of goods and services used by farmers for both farm family living and production purposes equivalent to that obtained in some specified base period.

Such a formula appears to be more desirable and on the whole less liable to misinterpretation than either an income or cost-type formula. Shifting to either a basic cost or income formula would simply substitute a new, more complicated set of calculations for the current formula without removing any of the limitations now present.

In fact, shifting the basic formula could well lead to a less representative, less useful set of calculations. Separate indexes could be calculated for each commodity or what would be a more difficult task, actual per unit costs of production could be estimated. But such specific indexes or costs still would not serve as acceptable guides to program decisions, despite the fact that their more specific nature might seem to lead toward such a conclusion.

Moreover, in many cases separate commodity indexes would not differ much from the parity index for prices and cost rates paid by farmers generally, especially if allowance is made for goods and services used in farm family living. However, those who argue for specific commodity indexes also often envision approximating actual per unit costs by allowing for changes in productive efficiency and assigning imputed values to the farmland and farm labor supplied by the farmer himself.

Cost considerations are one of the factors which need to be taken into account in deciding what may be desirable or feasible for a particular commodity, but cost considerations are far too complex to be easily reduced into any simple formula; in any event they are only one of a number of factors to be considered.

Some arguments also can be advanced for the use of an income formula. But here again there are many complicating factors. First of all, there are two separate kinds of income arguments: On the one hand, it is suggested that parity farm income should be that income which would allow farm standards of living to increase at the same rate as nonfarm standards of living; on the other hand, there is the suggestion that farm and nonfarm standards of living, per capita dollar incomes or rates of return per dollar invested and hours worked should be equal.

The first type of income formula with a 1910-14 base was provided in the Soil Conservation and Domestic Allotment Act of 1936 and the Agricultural Adjustment Act of 1938. Under these earlier definitions farm incomes today would be at or perhaps somewhat above the parity level.

The second type of income formula is in the Agricultural Act of 1948, as amended, which provides that—

"Parity," as applied to income, shall be that gross income from agriculture which will provide the farm operator and his family with a standard of living equivalent to those afforded persons dependent upon other gainful occupation. "Parity" as applied to income from any agriculture commodity for any year, shall be that gross income which bears the same relationship to parity income from agriculture or such year as the average gross income from such commodity for the preceding ten calendar years bears to the average gross income from agriculture for such ten calendar years.

This second parity income concept or definition offers some difficult problems in actual measurement and has in fact never been used. Statistically, just who and what should be included in "other gainful occupation"? Where does hired farm labor fit? How shall allowances be made for such things as differences in housing standards, community services, security, and personal or family preferences which are not easily measured in dollar terms? What allowances should be made for the different geographic distribution of farm versus nonfarm population?

The argument for equal standards of living is sometimes simplified by suggesting equal per capita dollar incomes. To give farm people the same per capita dollar income as nonfarm people would, on the basis of such estimates as are available, require an approximate doubling of current net farm income or an increase of at least one-half in farm sales and the value of gross farm output.

An equally wide difference between current per capita net farm income and the indicated parity level would exist if the parity standard were so calculated as to give the same rate of return per hour of farm labor and per dollar of farm investment as is now being realized for nonfarm labor and nonfarm business investment. Such a formula would require a general increase in per unit parity prices of one-third, one-half, or more.

Further, the use of an income standard, whatever the level at which it moves, also involves a series of supplementary calculations if commodity prices are desired. Suggested income formulas usually start with a per capita or per unit net income for farm people which, strictly speaking, should include income from both farm and nonfarm sources. Farm population or the resources devoted to farm production must also be taken into account to arrive at a meaningful total. An estimated set of production expenses must then be added to the farm-derived portion of the income to indicate gross farm income which farmers need to realize from the sale or use of farm commodities. This gross farm income must then be broken down as between commodities by some device or formula and after that some estimated production or sales must be used in order to arrive at a specific commodity price which would match the income formula. Such a set of calculations would not alleviate the common complaint that parity calculations are already too difficult.

Such a procedure, if it could be successfully employed, might serve to reduce or to eliminate the differences in overall per capita income

as between farm and nonfarm occupations. But it would increase the income differences from person to person within agriculture. Those farmers with large units, whose incomes are already much above the average for farmers, would find their incomes much increased. Farmers with small units, producing only small quantities, would find that their low incomes were only slightly increased.

SHIFTING THE PARITY BASE FORWARD

If the conclusion to continue the same type of parity formula as the one now being used is accepted, the next step is to consider what changes in this formula are desirable or needed.

A pertinent criticism of the present legislative provisions for calculating parity prices is that the reference base, 1910-14, is too far away. Some more recent base, as closely representative of current conditions as possible, should be used instead. Hence:

It is recommended that the modernized parity formula now contained in the Agricultural Adjustment Act of 1938, as amended, be continued except that the base period January 1910 to December 1914, inclusive, should be changed to January 1947 to December 1956, inclusive.

This change could be accomplished by legislation providing as follows:

Section 301 (a) (1) (B) and (C) of the Agricultural Adjustment Act of 1938, as amended (7 U. S. C. 1301 (a) (1) (B) and (C)), is amended by deleting "January 1910 to December 1914, inclusive," wherever it appears and inserting in lieu thereof "January 1947 to December 1956, inclusive."

American agriculture is highly dynamic: It has been going through a veritable technological revolution which is still under way. At the same time there have been substantial shifts on the demand side, some of which are still in process. The impact of these shifts varies greatly among commodities. This makes it even more difficult for any fixed formula to produce results which will be appropriate for price or actual operating purposes for any given year.

This is a situation which has led in large part to the discussion of ways and means of improving and modernizing the parity standard. It is difficult to defend the use of a base period which is now more than 40 years past (even though 1910-14 was a statistically sound base for calculations immediately following World War I). *Shifting the base forward to 1947-56 would not mean that the new parity calculations would be any freer of the various limitations already discussed than those calculated from the old base. It would, however, make the statistical calculations necessary to maintain technically sound indexes simpler to carry forward and it would recognize, at least in principle, that there is no sound argument for indefinitely holding conditions constant as of any particular base period.*

This change in base period on the basis of the index of prices paid and index of prices received as now computed would not significantly affect parity prices of individual commodities or the parity ratio. The parity price for each commodity on a modernized basis would be reduced about 2 percent below the level that would result from the use of the present base period. The parity ratio would be raised 2 percent.

Under this recommendation parity prices as between commodities would continue to be so adjusted as to maintain the same inter-

commodity relationships as prevailed during the most immediately preceding 10 years. Also, the transitional parity provisions of the current legislation would continue in full effect.

The use of the 10-year moving average device keeps comparisons as between commodities on a relatively current base and does provide for the gradual recognition of persistent trends in relative prices as between different commodities, whether these trends be due to changes in costs and methods of production, to shifts in demand, or to whatever combination may be at work. At the same time, *the overall relationship between farm and nonfarm prices as aggregates would be held constant at the average for the new base period, 1947-56.*

OTHER CONSIDERATIONS

Attention has been given to various other modifications that are suggested from time to time, including the possible use of efficiency modifiers—that is, to adjusting the parity prices for particular commodities or for farm commodities generally by an amount to offset increased productive efficiency measured from some particular base period. For example, overall efficiency of producing agricultural commodities has perhaps increased by about 30 percent since 1940.

Should parity prices be adjusted for this increasing efficiency, either wholly or in part?

The Department does not recommend such an adjustment. Measuring agricultural efficiency either generally or for specific commodities with sufficient accuracy to use in such calculations would present a considerable statistical problem. And if this were done, it would for this reason be necessary to start from some recent base period.

The essential question with respect to using efficiency modifiers, however, is of a different character. If parity prices for farm products are to be reduced as efficiency increases, what corresponding policies are to be followed with respect to prices of nonfarm products where efficiency has also increased?

Those who suggest the use of efficiency modifiers indicate that some kind of sharing formula would be necessary, that perhaps the parity standard should be adjusted for only one-half the increase in efficiency on the assumption that the gain should be equally divided between farmers and the consuming public. Others raise the question as to whether increases in industrial and nonfarm efficiency, if passed on in prices of nonfarm goods and services, are not already reflected in the index of prices paid by farmers and so included in the parity calculation.

Surely changes in efficiency of producing farm commodities need to be considered in arriving at actual policies and programs. At the same time, the question is important as to how gains from increasing efficiency, whether in the farm or nonfarm sector, are to be distributed. Further complicating the parity formula will not answer these questions. Once again the difference between measuring what is happening and deciding what should be done should be recognized.

Questions are also raised from time to time as to the effect of stabilization activities upon parity prices. Currently producers of many commodities sell all they produce in a relatively free market while other producers sell as much of their commodity in the open market as will move at the support price with the remainder going by one means or another, to the United States Government.

With respect to this second class of commodities, substantial losses have been and are being realized by the Government. Further, these activities result in holding the parity prices for the particular commodities for which losses are incurred at a higher level than would otherwise be the case. Should some adjustment be made in parity prices for commodities on which substantial losses are realized?

The Department does not recommend such an adjustment.

The Congress has provided for the various activities in question with the full realization that prices will be affected. Further, the parity data and indexes as now calculated endeavor to measure actual prices or returns for commodities sold by farmers and prices paid and such an adjustment would depart from this simple rule without substantially altering the basic arrangements which lead to such losses. What is needed is operating flexibility, not a more complicated parity formula.

Attention has also been given to certain questions with respect to the technical calculation of parity prices. Should the Congress decide to revise current legislation, some of these technical matters should be reviewed.

Current legislation, for example, provides that the base prices for the various commodities shall be determined from calendar year averages of monthly prices or where the Secretary finds this impracticable, season average prices may be used. As a result, simple averages of monthly prices are used in calculating base prices for most of the general farm commodities while weighted season average prices are used for most of the specialized crops including almost all the fruits and vegetables. In some ways, a more uniform set of base prices would be obtained if weighted averages (that is, prices equal to estimated returns from all sales divided by the quantity sold during the season or calendar year) were used for all commodities. For most major commodities which are continuously sold or traded, however, the differences between the two types of averages are small.

Current legislation also requires the Department to calculate each month 3 separate parity indexes, 2 of which are obsolete. That is, in addition to the most recently revised parity index, the old indexes with the old commodity and service expenditures patterns used prior to 1950 must also be calculated each month in order to determine the transitional parities for commodities whose effective parity prices trace back to the old formula and base averages for 1910-14 or 1919-29. Actually the differences for any particular month between the new and the old obsolete indexes are relatively small and consideration might be given to the use of the single revised index or the appropriate component parts of the most recently revised index.

TABLE 1.—Effective and new parity prices for selected farm products as based on 1910-14 and on 1947-56, United States, Jan. 15, 1957

Commodity	Unit	Parity prices 1910-14 base period ¹		New parity prices 1947-56 base period ²
		Effective	New	
Basic commodities:				
Cotton, American upland, per pound	Cent	36.56	36.56	35.82
Wheat, per bushel	Dollar	\$ 2.49	2.30	2.26
Rice, per hundredweight	do	5.69	5.69	5.58
Corn, per bushel	do	\$ 1.80	1.70	1.66
Peanuts, per pound	Cent	\$ 13.5	12.1	11.9
Tobacco, per pound:				
Flue-cured, types 11-14	do	55.8	55.8	54.6
Burley, type 31	do	56.6	56.6	55.6
Maryland, type 32	do	52.6	52.6	51.4
Dark air-cured, types 35-36	do	32.7	32.7	32.0
Designated nonbasic commodities:				
Tung nuts, per ton	Dollar	79.10	79.10	77.40
Butterfat, in crates, per pound	Cent	73.0	73.0	71.6
All milk, wholesale, per hundredweight	Dollar	4.76	4.76	4.68
Honey, wholesale, comb, per pound	Cent	33.3	33.3	32.6
Wool and mohair:				
Wool, per pound	do	64.5	64.5	63.3
Mohair, per pound	do	84.1	84.1	82.3
Other nonbasic commodities:				
Barley, per bushel	Dollar	1.34	1.34	1.32
Beans, dry edible, per hundredweight	do	9.29	9.29	9.09
Cottonseed, per ton	do	71.00	71.00	69.70
Flaxseed, per bushel	do	4.50	4.50	4.40
Oats, per bushel	do	.864	.864	.848
Potatoes, per hundredweight	do	2.42	2.42	2.38
Rye, per bushel	do	1.65	1.65	1.62
Sorghum, grain, per hundredweight	do	2.62	2.62	2.57
Soybeans, per bushel	do	2.98	2.98	2.92
Sweet potatoes, per hundredweight	do	5.17	5.17	5.08
Grapefruit, per box ⁴	do	\$ 1.39	.847	.829
Lemons, per box ⁴	do	2.73	2.73	2.68
Limes, per box	do	6.02	6.02	5.89
Oranges, per box ⁴	do	\$ 2.56	1.70	1.66
Apples, for fresh use, per bushel	do	2.85	2.85	2.80
Beef cattle, per hundredweight	do	22.10	22.10	21.70
Calves, per hundredweight	do	24.40	24.40	23.90
All chickens, live, per pound	Cent	28.2	28.2	27.6
Eggs, per dozen	do	47.3	47.3	46.2
Hogs, per hundredweight	Dollar	21.60	21.60	21.20
Lambs, per hundredweight	do	24.60	24.60	24.10
Sheep, per hundredweight	do	9.99	9.99	9.78
Turkeys, live, per pound	Cent	36.8	36.8	36.1

¹ Parity prices computed by multiplying adjusted base prices 1910-14 by the parity index (292), except as otherwise noted.

² Parity prices computed by multiplying adjusted base prices 1947-56 by the index of prices paid, including interest, taxes, and farm wage rates, 1947-56=100 (108).

³ Transitional parity, basic commodities 95 percent and nonbasic commodities 60 percent of parity price computed under formula in use prior to Jan. 1, 1950.

⁴ Equivalent on-tree returns for all methods of sale.

II. THE PRESENT PARITY PRICE FORMULA

Parity prices have now been a part of the agricultural scene for almost a quarter century. From the time they were first established in the depths of the great depression, the central idea underlying parity prices for farm products has been per unit prices which would yield products sold the same purchasing power as in some specified previous time period.

Over the years, some modifications and exceptions have been made in the way parity prices for certain farm products were computed, and a major change in the method of computing parity prices became effective in 1950. However, the law provided for a gradual transition to the new formula which has not yet been fully realized. Thus, the current parity system, in fact, involves a dual standard for a few farm

products. At the beginning of 1957, parity prices for several important commodities including wheat, corn, and peanuts are still largely determined by a formula substantially unchanged since 1933 although parity prices for most commodities are determined by a different, more modern formula. Although the legislation provides for a gradual transition from the old to new parity prices in cases where parities for specific commodities were reduced, there have been occasions when this adjustment process has been slowed, most recently by the suspension of the transitional adjustment for basic commodities which was scheduled for 1957.

PARITY PRICES PRIOR TO 1950

From the beginning, parity prices have been defined and their methods of calculation prescribed by legislation. The Agricultural Adjustment Act of 1933 stated that it was the policy of Congress among other things to—

(1) * * * reestablish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy equivalent to the purchasing power in the base period. The base period in the case of all agricultural commodities except tobacco shall be the prewar period August 1909–July 1914. In the case of tobacco, the base period shall be the postwar period August 1919–July 1929.

(2) to approach such equality of purchasing power by gradual correction of the present inequalities therein at as rapid a rate as is deemed feasible in view of the current consumptive demand in domestic and foreign markets.¹

In effect, the Congress determined that the relationship between prices received by farmers and prices paid by farmers that existed during 1910–14 was a general objective to be approached gradually and at as rapid a rate as was deemed desirable and feasible. Further, the pattern of relationships that existed among the prices of the various commodities in 1910–14 was also considered generally appropriate in attaining that goal. It is significant that the legislation specifically emphasized the term “purchasing power.” It was apparent from the beginning that the Congress did not consider parity as a measure of changes in the cost of production of farm products.

The parity price formula that resulted from this legislative definition was relatively simple. To calculate the parity price of most farm products, it was necessary only to multiply the price received by farmers for the commodity during the period August 1909–July 1914 by an index of prices paid by farmers expressed as a percentage of 1910–14. Thus, the parity price of a commodity changed over time to the same extent that prices farmers had to pay for items used in farm living and farm production changed with respect to the 1910–14 period.²

For a number of agricultural commodities price data for 1910–14 were not available or, for other reasons, that base period was considered unsatisfactory. As a result the Congress specifically provided for use of the period August 1919–July 1929 as the base period for tobacco, a product for which demand was significantly higher following World War I. Potatoes were shifted to this base in 1935. Later, as the demand for the cigarette tobaccos continued to increase the base period for flue-cured and burley tobacco was shifted to the period

¹ The terms “parity” or “parity price” were not used in this first legislative definition. The words “parity prices” first appeared in the Agricultural Adjustment Act of 1938.

² Legislation effective in 1935 provided that taxes on farm real estate and interest on loans secured by farm real estate should be included as cost items in computing parity prices for commodities with a 1910–14 base period.

August 1934–July 1939 and the Congress further provided that in connection with marketing agreements or marketing orders the period August 1919–July 1929 or some part thereof could be used for any commodity for which satisfactory data did not exist for the period August 1909–July 1914. For these commodities, comparable base periods were used for the index of prices paid to determine parity prices.

To this extent there was some modification of the 1910–14 pattern of price relationships. However, for most of the major farm commodities the period 1910–14 determined the parity price intercommodity relationships until the modernized formula provided in the Agricultural Acts of 1948 and 1949 went into effect following January 1, 1950.

PARITY PRICES SINCE 1950

The Agricultural Acts of 1948 and 1949 made a major modification in the parity price formula. The new formula retains the 1910–14 period as the base for the overall relationship between prices received by farmers and prices paid by farmers including interest, taxes, and farm wage rates but utilizes the pattern of relationships among prices of the commodities that existed in the immediately preceding 10-year period to determine the pattern of relationships among the parity prices. For determining parity prices in 1957, the 10-year period, 1947–56, is applicable.

Specifically, parity prices under the new formula are computed by dividing the average price for a commodity in the latest 10-year period by the average index of prices received by farmers in the same period, on a 1910–14=100 base. This provides an adjusted base price for the commodity for the 1910–14 period. This adjusted base price is the average price which would have prevailed for the commodity if the price trend for the given commodity from the 1910–14 period to the most recent 10-year period had been the same as the average for all commodities in the index. The adjusted base price is multiplied by the current parity index (index of prices paid, including interest, taxes and wage rates) which reflects the change in prices paid by farmers since 1910–14.

It should be noted that the general level of prices received which would be equivalent to parity is essentially the same under both the old and the new formula.³ However, parity prices for individual commodities under the new formula may be quite different from those calculated according to the old formula. New parity prices are higher for some commodities and lower for others.

Relation of old and new parity

Insofar as the price position of a commodity is improved in the latest 10-year period relative to the average for all farm products as

³ A minor difference results from the fact that there have been some shifts in weights and in items included in the parity index which were not in the parity index as computed prior to 1950. However, good statistical practice requires that such indexes as the parity index be reweighted or shifted forward from time to time to cover the kinds and quantities of goods and services currently purchased. This has been done twice since the enactment of the Agricultural Adjustment Act of 1933. In 1933 the weight pattern was shifted from 1920–25 to 1924–29, and again in 1950, the weight pattern was shifted forward to 1937–41. Meanwhile, a nationwide survey of farm family expenditures for both production and farm family living during the calendar year 1955 was made in early 1956, and the first tabulations are now being completed. This survey should supply the basis for reweighting the parity index on a current basis in the near future. A comparable reweighting should be accomplished for the index of prices received by farmers. Such necessary revisions resulting from new weighting patterns and chaining of the new indexes to the old in order to maintain the reference base, 1910–14, may result in small shifts in the levels of these indexes and in their relationship to each other.

compared with its relative situation in the 1910-14 period, parity will be higher under the new formula than under the old. Similarly, if relative prices should be less favorable, the new parity will be lower. Thus, the new parity takes into account such changes in the demand and supply conditions for a particular commodity as have been reflected in the prices for that commodity during the preceding 10 years.

How this difference between the new and the old parity formulas translates into the parity prices is shown in the accompanying chart and table 2 for a number of major farm products. The chart shows how the new or modernized parity would have compared as a percentage of the old parity from 1920 through 1956. It is obvious that for some commodities the new parities depart substantially from the old parities, taking into account the additional factor of more recent price movements involved in the new formula. Thus, the new parities are lower than the old for products such as potatoes and wheat which have not experienced a rising demand over the years and higher for such products as beef cattle for which demand grows more rapidly. That is, the new or modernized parity gradually adjusts the relative parity prices for specific commodities for persistent or continuing changes in actual market prices. But the overall parity level for all farm products as an aggregate remains the same with the various commodity changes offsetting each other.

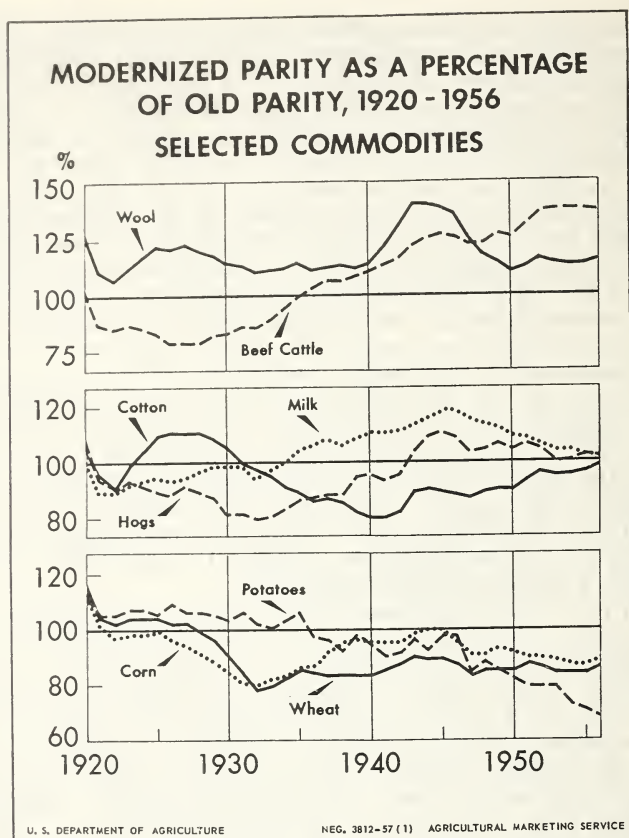
From time to time questions are raised about possible future changes in new parity prices for wheat, corn, and cotton relative to the old parity prices for these commodities. A precise answer to these questions would require present knowledge of prices of the individual commodities and the index of prices received by farmers for the next several years, which obviously cannot be foreseen. We can, however, indicate the changes which would occur in new parity prices relative to old parity prices for these commodities *if the price relationships of the past year were to continue for the next few years.*

In this event the new parity price for wheat would increase very slightly relative to the old. The new parity price for corn, on the other hand, would decrease slightly. For both commodities by 1960 the change would be around 2 percent of the old parity price, and the new parity prices for wheat and corn would be around 90 percent of the old, not much different from the present relationship between old and new parity prices for these commodities.

For cotton the new parity would increase relative to the old and by 1960 would be slightly higher than the old parity. At present, old and new parity prices are much the same.

The transitional feature

Where the old parity price for a commodity was higher than the new parity, the legislation provides for a gradual reduction in the old parity until the new parity level is reached. At that point the old parity is permanently discarded. In the meantime, the transitional parity is the effective parity. For nonbasic commodities, the transition began in 1950 and has proceeded at the rate of 5 percent of the old parity price each year since then unless the new or modernized parity has been reached. Thus, transitional parity for nonbasics in 1957 is 60 percent of the old parity.



For some of the basic commodities (wheat, cotton, corn and peanuts) the transition to the new parity prices did not begin until 1956. As with the nonbasics, the transition is to be made downward in steps of not more than 5 percent of the old parity price per year. The Agricultural Act of 1956 provided for the postponing of the transitional step for 1957. Consequently, for 1957 transitional parity for the basics is 95 percent of the old parity.

If, as a result of further delay in the adoption of the transition for the basic commodities, prices of these products were increased, the parity prices of other commodities would be correspondingly decreased. Under the modernized parity formula, the overall relationship of farm to nonfarm prices is unchanged. With a given situation, whatever is gained by one commodity or one group of commodities in the way of a higher parity price must be lost by others.

When the transition to the new parity formula, currently in effect, has been completed the parity price structure will consist of the pattern of prices that existed in the immediately preceding 10-year period adjusted upward or downward on the basis of the relation between the average index of prices received (1910-14=100) during that 10-year period and the current index of prices paid including interest, taxes, and wage rates.

Present status of parity prices

A supplement to this report (appendix B) contains in considerable detail as of January 1957 the legislative authority, the methods of determining parity prices pertinent to the several farm commodities, the parity prices for each of over 160 farm products and the prices received by farmers for these commodities over the 10-year period, 1947-56. This supplement is from the official monthly price report of the United States Department of Agriculture, Agricultural Prices released at 3 p. m., January 30, 1957.

As 1957 begins, parity for most commodities is determined by the new formula. Out of the total list of farm products for which parity is computed, about 10 commodities are still involved in the transitional stage. These are shown on page 45, appendix B.

As indicated in the table, the gaps presently are not large between the transitional parity prices and the new formula parity prices for the basic commodities for which transitional parity is effective. These include wheat, corn, peanuts and Puerto Rican filler tobacco. If there were no change in the relationship between these prices, the downward transitional adjustment of 5 percent a year from the old parity level would take at most 3 years for parity for all basic commodities to shift to the new formula. However, as noted previously, future changes in the parity index, in the index of prices received by farmers and in the relative price position of these commodities in the previous 10-year period applicable, could alter this relationship so that a somewhat shorter or longer time period than 3 years would be required to make the full transition for all basic commodities.

For some of the nonbasic commodities still on a transitional basis, it could take 8 years or even longer to accomplish full transition to the new parity.

POSSIBLE TECHNICAL IMPROVEMENTS IN THE PARITY FORMULA

Several technical questions are raised from time to time with respect to the calculation of parity prices. One of these has to do with the use of simple averages of monthly prices versus weighted season averages in determining base prices, while a second has to do with the old, unrevised parity indexes used in calculating the "old" parities for transitional purposes.

Current legislation, for example, provides that the base prices for the various commodities shall be determined from calendar year averages of monthly prices or where the Secretary finds this impracticable, season average prices may be used. As a result simple averages of monthly prices are used in calculating base prices for most of the general farm commodities while weighted season average prices are used for most of the specialized crops including almost all the fruits and vegetables. In some ways, a more uniform set of base prices would be obtained if weighted averages (that is, prices equal to estimated income from all sales divided by the quantity sold during the season or calendar year) were used for all commodities. For most major commodities which are continuously sold or traded, however, the differences between the two types of averages are small.

Current legislation also requires the Department to calculate each month 3 separate parity indexes: 2 of which are obsolete. That is, in addition to the most recently revised or reweighted parity index

used in calculating current or modernized parity prices, the old indexes with the old commodity and service weighting or expenditures patterns used prior to 1948 must also be calculated each month in order to calculate the transitional parity prices for number of commodities whose effective parity prices trace back to the old parities calculated from the base 1910-14 or all or some part of the base 1919-29. Actually the differences for any particular month between the new and the old obsolete indexes are relatively small and consideration might be given to the use of a single index, or the appropriate component parts of the most recently revised index.

Should the Congress decide to revise current legislation some of these technical matters might well be reviewed.

TABLE 2.—*Modernized parity prices as a percentage of old parity prices, United States; 1920-56, selected commodities*

[Percent]									
Year	Wool	Beef cattle	Hogs	Milk, wholesale	Cotton	Corn	Wheat	Potatoes	Butterfat
1920-----	129	103	109	101	106	115	117	113	100
1921-----	112	88	94	89	96	102	105	106	89
1922-----	108	86	92	89	92	98	103	106	89
1923-----	113	88	94	92	99	99	105	108	92
1924-----	118	86	92	94	104	99	105	108	94
1925-----	123	84	90	95	110	100	105	106	96
1926-----	122	80	89	94	111	97	103	110	95
1927-----	124	80	92	95	111	95	103	107	97
1928-----	121	80	90	98	111	92	100	107	101
1929-----	119	83	88	99	109	89	97	106	105
1930-----	115	84	82	99	106	85	91	104	105
1931-----	114	87	82	99	100	82	85	107	104
1932-----	111	86	80	95	98	81	79	103	100
1933-----	112	90	81	98	96	83	80	101	102
1934-----	113	95	84	100	92	84	83	104	103
1935-----	115	100	87	105	90	87	86	107	106
1936-----	112	104	88	107	87	88	85	98	107
1937-----	113	107	89	109	88	93	84	97	109
1938-----	114	107	90	107	86	96	84	93	106
1939-----	113	109	95	109	83	97	84	99	106
1940-----	115	111	96	111	81	96	84	95	104
1941-----	123	114	94	111	81	96	86	91	105
1942-----	132	116	96	112	83	96	88	92	105
1943-----	141	123	104	114	90	99	91	97	109
1944-----	141	126	109	116	91	100	90	93	111
1945-----	140	128	111	119	90	100	90	98	114
1946-----	137	127	109	119	89	96	88	98	112
1947-----	127	123	104	116	88	92	84	86	112
1948-----	119	124	105	114	90	92	86	89	110
1949-----	115	128	107	113	91	94	86	86	110
1950-----	111	127	105	110	91	92	86	83	107
1951-----	113	132	107	109	94	91	88	80	106
1952-----	117	138	105	107	97	91	87	80	104
1953-----	115	139	100	105	96	90	85	80	102
1954-----	114	139	101	105	96	88	85	74	101
1955-----	114	139	103	103	97	88	85	72	99
1956-----	116	138	102	102	99	90	87	69	97

¹ Beginning 1941, American upland cotton only.

NOTE.—Parity prices computed according to the formula in effect since 1950 as a percentage of parity prices computed according to formula in effect prior to 1950.

III. USES AND LIMITATIONS OF THE PARITY FORMULA

Having described the present parity formula, and before discussing possible improvements, it would be well to consider some of the uses and limitations of this formula as well as of parity formulas in general.

The parity formula essentially is a purchasing power concept which measures current relationships between prices received by farmers and prices and cost rates paid by farmers as compared with the rela-

tionship between the same series in a previous period. Specifically, parity indicates those prices which would give farm products generally the same per unit purchasing power in terms of goods and services used in farm production and farm family living as that which prevailed in the base period 1910-14. At the same time parity prices for individual commodities are adjusted or "modernized" so as to maintain the same intercommodity relationships as prevailed during the most recent 10-year period.

Everyone recognizes the need for accurate measures of prices received by farmers and prices paid by farmers. Such statistics are an indispensable basis for any objective study of the agricultural situation. Not only do we need accurate quotations on prices of individual commodities at specific markets, we need accurate indexes to show what is happening to the average level of prices received by farmers for a large number of agricultural commodities produced throughout the country. Similarly, we need an accurate index of the prices farmers pay for the commodities they use, both in agricultural production and in living.

The need for such indexes is not by any means limited to agriculture. Similar indexes are widely used in the analysis of changes in the level of wages and business profits. Economists and statisticians have long been concerned with changes in the "real" wages and "real" earnings of business. When the present level of wages is compared with the level of several years ago, it is very important to take into account not only the change in hourly wages but also the change in living costs. This fact is quite generally recognized and has the basis for many wage contracts.

Even if there were no Government agricultural price-support programs at all, legislators, administrators, farm organization officials, and others would need accurate indexes of prices received and prices paid by farmers. Even if the Department stopped publishing the parity ratio as such, many people naturally (and properly) would divide one index by the other to compute the ratio. Assuming that the indexes of prices received and of prices paid are reasonably accurate, the parity ratio is an indicator of changes in the farm situation.

Arguments about the parity formula chiefly center around its use as a basis for price support operations by the Government. The fact is that no possible parity formula can ever be satisfactory as the sole guide to price support operations. Suppose, for example, that all technical statistical problems were solved and that we had as good a parity price as possible for each farm commodity. Even then, it would be neither feasible nor desirable for the Government to maintain the price of each farm commodity at some definite percentage of its parity price, whether that percentage were 100, 90, 75, 60, or some other level.

A carefully planned and well-executed program of agricultural price supports can be of great benefit to farmers and to the general public. However, such a program must not ignore the facts concerning supply, demand, competition, and markets. From a practical standpoint, prices of all agricultural commodities simply cannot be fixed or pegged at some specified arbitrary percentage of parity. Any attempt to do so would not only be uneconomic and costly, in many cases it would be directly contrary to the long-term interest of farmers.

Even an improved parity formula will only call attention to changes occurring in prices and cost rates; by itself it can neither indicate why the changes have occurred nor what should be done about them.

The Congress has many times recognized that a successful price-support program cannot be built upon a parity formula alone, and that the Department must take into account other facts. For example, the Agricultural Act of 1933, which first gave legislative recognition to the purchasing-power comparisons which are now at the heart of the parity concept, directed the Department to so conduct its price-support operations as to approach parity gradually "and at as rapid a rate as is deemed feasible."

Moreover, the Congress has never required that prices of all agricultural commodities be supported according to some fixed rule. And even for the basic and other mandatory price-support commodities it has become increasingly necessary to either allow operating flexibility or invoke severely restrictive acreage allotments and marketing quotas.

True, the present parity formula is helpful as a general indicator, both for agriculture as a whole and commodity by commodity. True, an improved parity formula would make it a better guide. The calculation of comparisons by the same method for each of the agricultural commodities gives a more systematic and coherent picture than the calculation of a separate standard for each individual commodity. In addition, the use of the same standard over a period of years provides a relatively uniform measure against which administrative decisions and actual operations can be judged.

If the parity formula were abolished for this purpose, some other formula doubtless would take its place. The current purchasing concept was originally adopted not because it was perfect but rather because it seemed to have less shortcomings than the other proposals then being advanced. It is believed that with all its limitations, the present concept of parity is still superior to that of costs of production or some general income formula.

The indexes of prices received and prices paid (including allowances for interest and taxes per acre of farm real estate and wages paid hired farm labor) and the parity formula are among the most important statistics in the field of agriculture. For this reason there is need for constant study and search for possible improvements to make these indexes as accurate and useful as possible. But these indexes and the purchasing power comparisons which flow from the parity calculations are far from adequate as the sole criterion of price-support operations for farm commodities, of what is economically sound, financially possible, and administratively feasible.

Parity prices will not necessarily sell wheat or cotton in the foreign markets; nor will they move excess supplies or protect farm commodities against substitutes or competing suppliers either at home or abroad. Parity prices do not necessarily measure the profit level of farmers producing particular commodities. Parity prices do not necessarily increase incomes from small scale farming operations by sufficient amounts to yield satisfactory income.

These are not of course new ideas.

As indicated earlier current as well as past legislation has recognized that in formulating price-support policy for a particular agricultural commodity there is the need for considering the whole complex of

factors affecting the particular commodity. For example, section 401 of the Agricultural Act of 1949, as amended, requires a variety of factors to be taken into consideration in determining, in the case of any commodity for which price support is discretionary, whether a price-support operation shall be undertaken and the level of such support and, in the case of any commodity for which price support is mandatory, the level of support in excess of the minimum level prescribed for such commodity. These factors are (1) the supply of the commodity in relation to the demand therefor, (2) the price levels at which other commodities are being supported and, in the case of feed grains, the feed values of such grains in relation to corn, (3) the availability of funds, (4) the perishability of the commodity, (5) the importance of the commodity to agriculture and the national economy, (6) the ability to dispose of stocks acquired through a price support operation, (7) the need for offsetting temporary losses of export markets, and (8) the ability and willingness of producers to keep supplies in line with demand. Section 401 superseded a similar provision contained in section 202 of the Agricultural Act of 1948.

IV. LEADING ALTERNATIVES RELATING TO PARITY PRICES

A preceding section of this report has discussed the present parity formula, which is a generalized purchasing power type of formula related to the 1910-14 base period. Consideration will be given first to possible changes in the formula involving a more recent base period. The sections to follow will also consider various proposals to incorporate in the parity formula, separate prices paid or cost rate indexes, a modifier to adjust parity prices for efficiency in farm production, a modifier to adjust parity prices for costs of stabilization programs, and finally, various parity price systems designed to yield parity returns or parity income.

A. DIFFERENT BASE PERIODS

From the beginning, some twenty-odd years ago, the parity price system has been anchored to the 1910-14 base period. Even under the new parity formula, which determines the relative position of parity prices for individual commodities from the price history of the preceding 10 years, the average level of parity continues to stem from the change in prices paid by farmers since the pre-World War I period. We are now 47 years removed from the beginning of that historic base period and, largely for that reason, increasing criticism is being directed toward its continued use for parity-price purposes.

It is quite clear that the nature of modern agriculture is appreciably different from that in 1910-14. The onrush of technology has brought tremendous changes in farming methods and in the farm cost structure. Last year, our farms produced nearly twice as much as in 1910-14 with one-third fewer man-hours of farmwork. Output per man-hour has tripled. During this span of years, covering almost a half century, we have come from the horse-and-mule era to a high state of mechanization and scientific farming.

Much of this technological progress has occurred in fairly recent times. In fact, three-fourths of the increase in farm productivity per man-hour over the past 46 years has taken place in the last 16 years.

Similarly, during the past two decades there has been a remarkable improvement in farm family living standards just as there has been elsewhere in the economy. And the process of economic growth has reshaped the market demands for farm products and intensified the competition for those markets. By any standard, we find little in common between the agriculture of 1910-14 and the agriculture of recent times.⁴

Considerations for evaluating alternative base periods

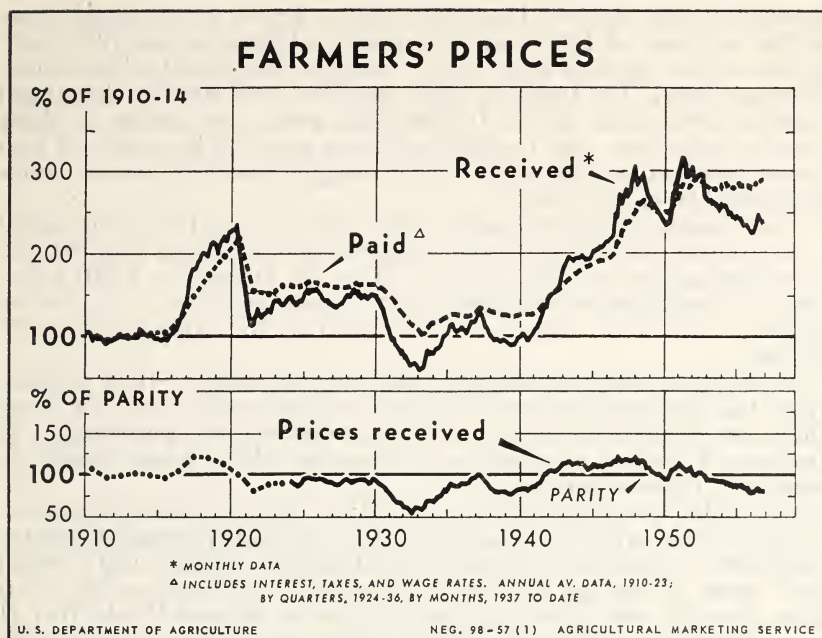
There are no hard and fast rules for determining an appropriate base period for the parity relationship. In fact, as indicated earlier, there is, in a growing, relatively free market economy as this, no single set of base relationships or automatic formulas which determine what prices will be or should be in the future. Parity price comparisons serve only as measures of change, as indicators and analytical tools. There are many other factors which must also be considered in understanding why relative prices are changing, in arriving at decisions as to what actions should be taken and equally important, what the effects of those actions may be. Whatever the limitations of the parity formula, however, it is still desirable to select the most useful or suitable base period for the appropriate indexes and purchasing power comparisons. In appraising the possibilities for moving forward in time to a new base, it would be well to consider certain characteristics which would be desirable in any such new base.

First, ideally, the base period should be fairly representative of the kind of agriculture that is likely to prevail for some years ahead. Otherwise, the parity measurement would have little meaning in appraising the agricultural situation as it develops in the future.

Second, ideally, the base period should reflect a fairly stable price situation, unaffected by wars and depressions (the two chief causes of sudden changes or shifts in price relationships). It should be a long enough period to smooth or iron out any short run cyclical relationships not only as between farm and nonfarm prices generally but also among farm product prices themselves. The current parity base, for example, covers a 5-year period. Some suggest that cyclical changes would be more adequately evened out over a 10-year period as provided for in connection with the moving average now used in computing modernized parity prices.

Finally, in view of the importance with which the parity index and the index of prices received by farmers have been endowed, changes in these indexes should be measured as accurately as possible. Statisticians agree that price changes over a long period of years are measured with much less accuracy than changes over a relatively few years. This arises from the fact that the content and quality of the items being priced change over time—and change appreciably over long periods of time. Further, there are much fewer price data available for earlier years than for recent years. Thus, the parity index measures changes in prices of items purchased by farmers with considerably less reliability over a quarter century than over a 5- or 10-year period and with even less reliability over the forty-odd years which the parity index is now required to do.

⁴ This is not to suggest that the choice of the 1910-14 base period was inappropriate when first established by law in 1933. At that time, there were, in fact, relatively few other years unaffected by war or depression which could reasonably be considered as a base period. Moreover, the pace of farm technology was relatively slow in the 1920's and early 1930's.



Alternative base periods

Trends in prices received and paid by farmers and the parity ratio are shown in the accompanying chart from 1910 to 1956. A substantial number of years during this period were involved in 2 major wars and 2 serious depressions. For those reasons the years from about 1915 to the early 1920's, the first half of the 1930's and the first half of the 1940's are not considered further as possible alternative base periods. Thus, the possibilities of periods covering 5 years or longer include: 1910-14, 1923-29, 1935-39, 1947-56.

As indicated in the chart, the earlier periods, 1910-14 and 1923-29, showed considerable price stability both with reference to average prices received by farmers and average prices paid. Both were periods of general prosperity, although there were some connected with agriculture who felt that agriculture in the 1920's had not recovered fully from the collapse after World War I and was not sharing equally in the Nation's prosperity. The year-to-year movement of prices in the 1935-39 period showed fairly sharp changes, reflecting not only severe drought conditions in the first several years but also a substantial economic recession in 1938 which sharply reduced the demand for food and other farm products. This period following 1935 can scarcely be considered as one of national prosperity. Unemployment ranged from about 8 million to almost 11 million, levels of unemployment clearly unacceptable in modern times.

Since World War II, there have been two fairly complete farm price cycles. The first began after the release of most price controls in 1946 and the rise was augmented by pressing demands for food from a war-damaged world. Pricewise, the crest of these demands from abroad was reached in January 1948, after which prices of farm

products declined until December 1949. Prices strengthened some in the first half of 1950 and the Korean outbreak in mid-1950 instituted another marked price cycle. After a substantial advance into February 1951, the trend in prices received was steadily downward through December 1955. In the past year, the decline in farm product prices has come to a halt and some recovery has occurred with prices received in December 1956 averaging some 7 percent above those for December 1955.

These changes in farm product prices over the past 10 years occurred in a situation of persistent cost increases in the things that farmers buy during much of the period. Thus, in December 1956, prices received by farmers averaged some 7 percent below the level of January 1947 while prices and cost rates paid by farmers were up 27 percent.

Advantages and disadvantages of the several periods.—It is obvious, from this historical review, that none of the possible periods meets fully the ideal conditions for a base period outlined previously. It becomes a matter of selecting that period which comes closest to satisfying these conditions.

From the viewpoint of price stability over a considerable number of years alone, price history indicates that the earlier periods involving the 1910-14 years or a period from about the middle 1920's would have some advantage as a base period over any later period. But these periods, and in fact any period prior to the post-World War II years, suffer from the serious disadvantage of being unrepresentative of modern day agriculture. Furthermore, the problem of measuring price change reliably over a long time period would still exist.

The years 1935-39 hold little promise of providing a satisfactory base period. This period is too far in the past to be representative of present-day agriculture; nor would the problem of measurement be appreciably eased. Moreover, there was about as much price instability in that period as in much of the post-World War II period.

Turning to the latter period, and specifically to the years 1947-56, it is clear that this period generally comes closer to reflecting the kind of agriculture we are likely to have over the years ahead than any earlier period. In addition, we can reasonably expect that measuring price changes from a more recent base period will have more validity than measurements from an earlier base. The parity index as a measure of price change of the things farmers buy will be substantially improved for the postwar period and the years immediately ahead from new information on farmers' expenditures for living and production in 1955 now becoming available. But this period, too, is not without some considerable disadvantage. Price instability and rapidly changing commodity relationships have accompanied the ebb and flow of foreign demands and the impact of the Korean situation. These cannot be avoided in any 5-year period that may be selected from the last 10 years. However, the disadvantage that stems from this source can be substantially neutralized by lengthening the base period to cover some 10 years rather than 5 years. A 10-year period reduces the influence of a particular year in the average and in a period of considerable change, reflects better the persistent forces affecting the average level of farm prices.

Although the advantages of the recent 10-year period appear to outweigh those for other periods in the past, it is recognized that

technology does not stand still and that the recent period will not continue representative of a dynamic agriculture indefinitely. There have been suggestions that the base period be a moving average encompassing the last 5 or 10 years. This would have the effect of continually moving the base period forward in time, adjusting both the basic farm-nonfarm price comparison as well as intercommodity price relationships to conditions prevailing in the immediately preceding 5 or 10 years. The disadvantages that would flow from such an alternative are fairly obvious. For example, a 5-year moving base in the present context would be particularly unrepresentative reflecting as it does an extended period of price decline, and the accumulation of tremendous surpluses. Further, and also with respect to a 10-year moving base period, the average level of parity prices in recent years would be trending downward while farm cost rates were actually moving up. There is some considerable advantage in having a fixed base from which to appraise changes in the agricultural situation. But, even so, it should be kept in mind that sometime in the future there will need to be a reexamination to determine whether the recent base period, if adopted, has also become timeworn and due for change.

Effect on the parity level of changing to alternative base periods.—The following table summarizes the effect on the average parity level of moving to alternative base periods discussed previously. The data are shown for selected 5-year periods, and for the last 10 years.

Indexes of prices received and paid by farmers and the parity ratio, selected periods, 1910-56

Period	Index of prices received (1910-14=100)	Index of prices paid (parity index, 1910-14=100)	Parity ratio (1910-14=100)	Percentage change in the average level of par- ity prices
1910-14.....	100	100	100	0
1925-29.....	147	161	91	-9
1935-39.....	107	125	86	-14
1947-51.....	275	258	108	+8
1952-56.....	253	283	90	-10
1947-56.....	264	270	98	-2

In brief, moving to a base period including the years 1925-29 would lower the average level of parity prices 9 percent. (Modernized parity prices would all be lowered by the same percentage.) Moving to the 1935-39 period when there was little economic growth and large unemployment would reduce the level by 14 percent. The 1947-51 period, one of inflationary pressures in some years, would increase parity by some 8 percent. On the other hand, use of 1952-56 as a base, when there was persistent downward movement in farm prices, would result in a reduction in parity of 10 percent. Use of the most recent 10-year period, 1947-56, as a base, would bring a small reduction in average parity, about 2 percent. As has been noted previously, when the weighting patterns of the parity index and the index of prices received are brought up to date there may be some small change in this relationship as compared with the 1910-14 period.

In appraising the relative changes in the parity level for the several periods, there is perhaps some significance in the fact that farm prices in the past have averaged parity or better in only a few periods since

1910. Except for the 1910-14 base, prices as a whole have averaged parity or better only in the years 1916-19 and 1942-52. These were notably war years or years affected by the inflationary aftermath of a war.

The base period as related to the pattern of price parity for individual commodities

As mentioned earlier, the new or modernized parity price formula which began to operate in 1950 provides for the same intercommodity structure or relative parity price pattern for individual farm commodities as prevailed during the immediately preceding 10-year period. This would be within a framework whereby the average of all parity prices is held at a level which gives farm products the same aggregate purchasing power as they had in the 1910-14 base period. This is an improvement over the old formula which determined the parity price relationships for individual commodities wholly from the price experience in the 1910-14 period. The indictment that the 1910-14 period in general is out-of-date and unrepresentative of modern agriculture applies with even greater force to the intercommodity relationships of that time. The fact that numerous exceptions to the 1910-14 base for particular commodities were effected is evidence of the impracticability of attempting to carry forward a frozen commodity pattern under a situation when supply and demand conditions are varied and changing commodity by commodity.

Inasmuch as technological change proceeds more rapidly for some farm products than for others and since significant shifts in demand and consumer preference are more likely to have greater impact on individual products than on agriculture as a whole, it seems desirable to retain the use of a 10-year moving average rather than to adopt a recent fixed base period for intercommodity parity relationships. Since the overall level of parity would be determined from a fixed base, the undesirable effects of general depression or inflation are eliminated without completely freezing the commodity price pattern. The flexibility introduced into the parity price system by this procedure gives weight to longer run significant changes for individual commodities which could not be reflected in a completely fixed base period for each commodity, no matter how recent.

TABLE 3.—*Indexes of prices paid for commodities used in production, United States and types of farming areas*

[1947-49=100]

	1937-41	1947-49	1952	1953	1954	1955
United States ¹	50	100	117	112	112	112
Dairy farms:						
Central Northeast ²	50	100	115	110	109	107
Eastern Wisconsin ²	51	100	116	114	114	112
Western Wisconsin ²	51	100	115	114	114	114
Hog-dairy farms, Corn Belt ²	54	100	116	114	113	113
Hog-beef raising farms, Corn Belt ²	53	100	117	116	114	113
Hog-beef fattening farms, Corn Belt ²	45	100	112	102	105	103
Cash grain farms, Corn Belt ²	55	100	119	120	121	123
Tobacco-livestock farms, Kentucky Bluegrass ²	45	100	118	118	121	118
Tobacco-cotton farms, Coastal Plains, North Carolina ²	(³)	100	114	116	118	119
Tobacco farms (small), Coastal Plains, North Carolina ²	(³)	100	113	115	117	117
Tobacco-cotton farms (large), Coastal Plains, North Carolina ²	(³)	100	109	110	117	118
Cotton farms:						
Southern Piedmont ²	48	100	115	112	108	118
Black Prairie, Texas ²	46	100	115	111	111	110
Nonirrigated, High Plains, Texas ²	47	100	112	119	104	109
Irrigated, High Plains, Texas ²	(³)	100	108	104	99	101
Small, Delta ²	(³)	100	113	110	109	108
Large-scale, Delta ²	(³)	100	116	107	110	108
Wheat-small grain-livestock farms, Northern Great Plains ²	49	100	115	115	116	116
Wheat-corn-livestock farms, Northern Great Plains ²	59	100	117	114	117	117
Wheat-roughage-livestock farms, Northern Great Plains ²	51	100	117	115	113	115
Winter wheat farms, Southern Plains ²	52	100	118	119	117	120
Wheat-pea farms, Washington and Idaho ²	51	100	121	122	120	118
Sheep ranches:						
Northern Great Plains livestock area ²	47	100	133	119	117	116
Southwest ²	(³)	100	123	103	97	103
Cattle ranches:						
Northern Great Plains livestock area ²	50	100	126	121	119	121
Intermountain region ²	53	100	121	120	115	121
Southwest ²	(³)	100	128	108	110	104

¹ Prices paid for production items, interest, taxes, and wages as published in monthly Agricultural Prices.² Prices paid, including taxes (but not interest), and wages to hired labor as published in Farm Costs and Returns, Agriculture Information Bulletin No. 158, ARS., USDA.³ Not available.

B. SEPARATE PARITY INDEXES FOR INDIVIDUAL COMMODITIES

The present parity index is a broad measure of the change in prices paid by farmers for commodities and services used in farm family living and in farm production. As such, it is representative of all farmers in the United States taken as a group and its weighting system reflects the average purchase pattern of some 5 million farm operators producing a wide variety of farm products under a wide range of conditions.

There have been suggestions that the use of a single, all purpose parity index to compute the parity price of an individual commodity is inappropriate, and that separate indexes should be established which would give due weight to differences in the kinds and quantities of items associated with the production of individual farm commodities, or groups of commodities. Thus, the purchasing power of an individual farm product would be determined from an index of the particular cost factors related to it rather than from the generalized index now in use.

Possible differences in end results as between separate indexes for individual commodities and the parity index

Table 3 compares indexes of prices paid for commodities used in production for 27 types of farms in several major farming areas in the United States and a similar index for the United States. The latter is part of the parity index. These indexes for important types of farms represent the situation on commercial family-operated farms of a particular type in a particular location. For this reason, the indexes are not necessarily representative of all farms involved in the production of a particular commodity over the Nation as a whole. They approximate, however, the variation in price trends for production items that might be expected between farms producing different commodities and also the variation between areas producing the same commodity.

Comparing indexes for 1955 with the average for 1947-49, the table indicates that the special prices paid indexes for all types of farms shown increased, ranging from only 1 percent for irrigated cotton farms in the high plains of Texas to 23 percent for cash grain farms in the Corn Belt. The rise in the United States index during the same period was 12 percent, which is also about the midpoint of the range shown for the individual types of farming areas.

Again, comparing 1955 with the average for 1947-49, there is almost as much variation in some instances in the cost-rates indexes in the production of the same commodity in different areas as there is between different commodities. For example, increases in the specialized price indexes for cattle ranches range from 4 percent in the Southwest to 21 percent in the northern Great Plains and Intermountain areas. Similarly, the increases since 1947-49 for cotton farms range from only 1 percent for irrigated operations in the high plains of Texas to some 18 percent in the southern Piedmont.

There generally appears to be, from the limited data available, a marked similarity in the price behavior of items used in the production of one farm commodity as compared with another. There is in fact a central tendency not only in the price trends shown for the recent years, but also in going back to the 1937-41 period for the 20 types of farming areas for which data are available (also shown in table 3). If trends in prices of family-living items were also included, it is likely the central tendency would be even stronger, since the content of items used in living generally do not vary as much between different types of farms as items used in farm production. This central tendency is not surprising inasmuch as price systems are largely nationwide in scope and affected by forces which operate generally in the economy.

Implications of moving to separate indexes

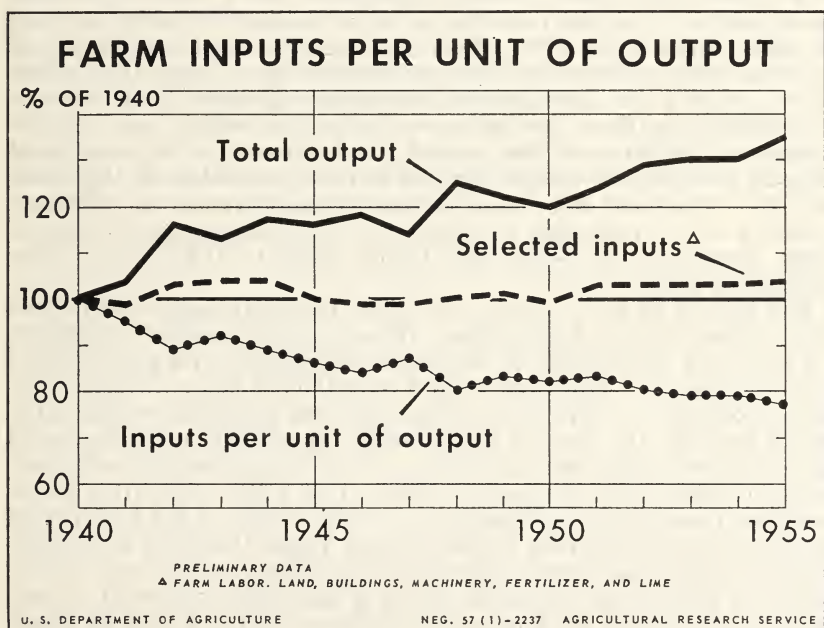
American agriculture is extremely diverse. Most of the farm products are produced under situations across the country which are widely varied in terms of such factors as soil, water resources, mechanization, efficiency, and levels of living. Wheat, for example, is produced in almost every State in the Union. A specialized cost rate or prices paid index reflecting the average wheat farmer under this variety of situations might be considered no more satisfactory to producers in particular areas or particular kinds of operations than the generalized parity index. There might well be requests for further fragmentation of the parity calculations for particular commodities.

These pressures would likely be intensified as the concept of parity prices might move from a purchasing power concept toward outright calculations of costs of production.

Limiting factors relating to separate indexes

There are a number of limiting factors to the development and significance of separate cost rate or commodity oriented indexes. First, it is clearly impossible to construct indexes which would go back in time beyond a relatively short period. The data on prices and on purchasing patterns in previous periods are simply not available nor could they be reliably reconstructed. Thus, any attempt to construct such indexes would be limited to establishing a recent base period and providing the means for carrying them forward in time. This would necessarily involve a major undertaking considering the 160 farm products for which parity prices are now computed.

Further, there are some difficult technical questions in assigning appropriate weights to the individual indexes. Even in this age of specialization, most of the farm products are produced in combination with many other farm products. This raises the problem of allocating certain costs, particularly overhead costs and living expenses (if farm family living should be covered), to the individual farm product as distinct from costs associated with other commodities produced on the same farm.



Finally, it should be recognized that the calculation of special commodity oriented indexes will most certainly lead to request for many other special considerations. There will be questions of different base periods for different commodities; of allowances for special situations or special problems which, since the indexes move a considerable way toward individual commodity costs, might seem reasonable. Such factors do need to be recognized and considered in analyz-

ing any particular commodity situation. But the question is raised as to whether these kinds of considerations can or should be fitted into a single general formula as is usually envisaged in discussions of the parity formula.⁵

C. EFFICIENCY MODIFIER FOR PARITY PRICES

During the last 15 years or so, technological development has progressed at a remarkable rate throughout the economy. In agriculture, as in industry, these developments have reshaped production methods and increased operating efficiency. As a result farm commodities are produced with less productive resources per unit than previously. The suggestion has been made that the parity-price formula which establishes a purchasing power goal for farm products on a unit basis should somehow be adjusted so as to reflect the fact that it takes less to produce a unit of a farm commodity today than in the base period 1910-14. This suggestion raises a number of significant problems, not only with respect to how such an efficiency modifier might be developed and how it might affect parity prices, but more basically whether an efficiency modifier should logically be introduced into the parity-price formula.

Illustration of an efficient modifier and its effect on parity prices

A preliminary index treating agriculture as a whole has been developed to reflect the trend in the use of productive inputs per unit of farm output since 1940. This index and the separate indexes of the total volume of selected farm inputs and of farm output from which it was derived are shown in the accompanying chart (and table 4).

According to these preliminary calculations, which can only be considered indicative of the general trend, farmers, as a group, used some 23 percent fewer inputs per unit of farm production in 1955 than in 1940. The chart also indicates that the improvement in efficiency reflected by the reduction in inputs per unit of output was substantially greater in the 5-year war period, 1940 to 1945, than in the ensuing 10 years.

For reasons of lack of data, the index presently cannot be carried back to the 1910-14 base period. Thus, it is impossible to appraise the effects of an adjustment for improved efficiency on parity prices since that period. However, even if only the efficiency increases that have taken place in agriculture since 1940 were given full weight in the parity formula, the level of parity prices for all farm products would have been reduced 23 percent in 1955. If the adjustment for efficiency were to reflect only the improvement since 1945, the parity prices would be reduced some 10 percent. In other words, if the base period for parity prices is moved to more recent years, the effect of the efficiency modifier on parity prices would be sharply diminished. Thus, assuming the recent 10-year period as a base, the downward adjustment to the parity level from the efficiency factor would be about 5 percent.

In addition to the present lack of data for earlier years, which has restricted the possible use of an efficiency modifier to about the last 15 years, there are further limitations which should be considered.

⁵ For a discussion of a special prices paid index of items used in cotton production see p. 22, Various Methods of Supporting the Price of Cotton (a study requested by the Senate Committee on Agricultural Appropriations), U. S. Department of Agriculture, December 31, 1956.

TABLE 4.—*Indexes of selected farm inputs, total farm output, and the ratio of selected inputs per unit of output*

[1940=100]

Year	Index of selected farm inputs ¹	Index of total farm output ²	Index of selected farm inputs per unit of total farm output ³
1940.....	100	100	100
1941.....	99	104	95
1942.....	103	116	89
1943.....	104	113	92
1944.....	104	117	89
1945.....	100	116	86
1946.....	99	118	84
1947.....	99	114	87
1948.....	100	125	80
1949.....	101	122	83
1950.....	99	120	82
1951.....	103	124	83
1952.....	103	129	80
1953.....	103	130	79
1954.....	103	130	79
1955.....	104	135	77

¹ Preliminary. Based on estimated inputs of total farm labor, land, buildings, machinery, fertilizer and lime combined on basis of average 1947-49 cost rates.

² Published regularly on a 1947-49 basis.

³ Preliminary index of selected inputs divided by index of total farm output.

The index of selected farm inputs is by no means complete. While the inclusion of farm labor (including unpaid family labor), land, buildings, machinery, fertilizer and lime account for the bulk of production inputs, estimates for some important items have not as yet been included in the index. Consequently, there is some unknown margin of error in the preliminary index from this source.

Further, the fact that weather conditions can result in fairly sharp changes in output and in the efficiency index in a particular year suggests the use of some smoothing process such as a moving average of several years, if an efficiency modifier is adopted.

Basic considerations relating to an efficiency modifier

Economic gains resulting from improved efficiency can be distributed in a number of ways; namely, through increased returns for capital investment, higher wages for labor, improved quality of products, lower prices, or a combination of any of these channels. In the non-farm economy, it is evident that price reductions from gains in efficiency have not been the general practice, especially in the post World War II period. Rather the tendency has been for industrial prices to be fairly steady or to move up. While there is no index, official or otherwise, which purports to reflect the gains in efficiency that have occurred in the nonfarm economy, it is clear that very substantial gains have in fact occurred. For example, the average consumer in the United States last year enjoyed a level of purchasing power some 50 percent higher than in 1940, after allowing for the rise in income taxes and in prices during that period. Farmers, as well, have shared in this increase in living levels. Further, productivity per man-hour of labor in the private nonfarm economy (which does not allow for the effect on productivity of the other production inputs, especially capital investment), has shown a substantial rise since 1940, much the same as the improvement in efficiency in agriculture. And the labor factor is the most important input in the industrial economy.

This suggests the possibility of several ways of handling the factor of efficiency in agriculture in the parity formula:

(1) To reflect fully the gains from efficiency in the parity price structure as illustrated earlier in this section. This would involve from the standpoint of a sufficiently accurate statistical basis, starting with some recent period.

(2) To apply some arbitrary or differential part of the gains in efficiency to parity prices. Thus, instead of reducing the level of parity prices to the full extent of the increase in efficiency, some arbitrary fraction, say a half of the gain, could be introduced into the formula. Further, if adequate measures were made available, the differential rate of efficiency gains as between the farm and nonfarm segments of the economy could be applied to parity prices. Thus, when the gain in farm efficiency exceeded that in nonfarm efficiency, parity prices would be lowered proportionally, and raised in the event of greater efficiency in industry.

(3) To continue the parity formula without an efficiency modifier. It should be considered whether the parity index does not presently reflect the gains in efficiency in the economy at large that have been passed along through the price route. That is, to the extent that increasing industrial and merchandising efficiencies are passed forward to the general public by reducing prices, prices paid by farmers should decline and parity prices will be correspondingly reduced.

Finally, it should be kept in mind that gains in efficiency do not proceed smoothly and in all segments of agriculture at the same time. There is a considerable question whether marked efficiencies stemming from a few products can appropriately be used to lower parity prices for others as well.⁶ Once again, this is a factor that should be kept in mind in analyzing problems relating to a particular commodity situation but serious questions must be raised as to the appropriateness of introducing such a modification into the current parity formula.

D. MODERNIZED PARITY MODIFIED FOR COSTS OF PRICE STABILIZATION PROGRAMS

Under the modernized parity formula, when the price experience of a particular commodity in the preceding 10-year period has been more favorable than the average price trend for all farm products, the parity price for the individual commodity is adjusted upward relative to the average, and offsetting downward adjustments are made elsewhere. Over the past 10 years, Government stabilization programs at substantial cost, such as price support programs and export subsidies, have maintained prices of some products higher than would have been realized otherwise. This has been reflected favorably in the parity prices for the commodities involved while parity prices for other commodities have absorbed an offsetting adjustment. Thus, there have been suggestions that the influence of Government programs should be eliminated from the parity calculations as a matter of equity to producers of other commodities as well as to eliminate the process by which price support levels and other programs have some perpetuating effect in determining parity prices and the future programs for the commodities concerned.

⁶ For a discussion of the possible calculation and application of the efficiency modifier to a particular commodity, see pp. 23-27, *Various Methods of Supporting the Price of Cotton* (a study requested by the Senate Committee on Agriculture Appropriations), U. S. Department of Agriculture, December 31, 1956

Methods of adjustment

It is not a simple matter, however, to remove all of the influences of Government programs on the farm price structure. It should be recognized that, if these programs had not existed, the patterns of production and intercommodity price relationships would have substantially altered over the past 10 years. Obviously, it is impossible to reconstruct the prices that would have existed under such a situation. It would be possible, however, to take into account tangible Government losses incurred or in prospect which are allocable to specific commodities.

There might well be substantial differences of opinion regarding the program costs to be included and the manner of their inclusion. This discussion and the illustrative calculations do not attempt to resolve these questions. They do, however, illustrate the way in which such adjustments could be made and some approximate effects on parity prices of such adjustments.

Realized cost of programs.—One approach would be to calculate the realized cost of specific programs primarily for the stabilization of prices and incomes on a per unit basis and deduct these per unit costs from the average prices for the individual commodities. In the case of the price-support program this procedure assigns the costs to the year in which the commodity is disposed of rather than to the year in which it was acquired.

As an example of this approach, calculations have been made using cost data for the 10-year period July 1946 to June 1956. The programs which have been included are: realized losses on CCC price support operations, CCC commodity export programs, International Wheat Agreement costs, section 32 surplus removal operations, and certain costs in connection with sales for foreign currency under title I of Public Law 480. A brief explanation of this last item is in order.

Under title I of Public Law 480, CCC is reimbursed for its full investment in commodities which are sold for foreign currency. In the case of some commodities, the CCC investment is substantially greater than the estimated market value of these commodities. As of June 30, 1956, for example, the CCC investment in commodities sold under title since the beginning of the program was about \$478 million and the estimated market value of these commodities was \$284 million. The difference of nearly \$195 million would have been recorded as a realized loss had these commodities been sold for dollars rather than for foreign currency.

The commodity amounts which add up to this \$195 million are included along with the figures for the other programs mentioned above.

Effects of adjustments on parity prices.—Table 5 presents illustrations of the effect of modifications on the basis of realized costs on the parity prices of a number of farm products for which programs have been particularly important.

In addition to the deductions from the prices of the individual commodities, it is necessary to calculate the effect of these adjustments on the index of prices received. The effect on the 1947-56 average of the index of the deductions on a realized cost basis is a reduction of 4 points from 265 to 261. The table indicates approximate parity prices on a 1947-56 period, the 10-year per-unit cost of programs, prices minus the costs and parity prices as modified to exclude the

costs of price stabilization. It will be noted that parity prices of commodities for which there were no programs would be increased by about 2 percent.

Realized cost of programs including reserve for future losses.—Use of the figures on realized losses to modify the prices of individual commodities in the parity calculation as discussed in the preceding section is subject to criticism on the grounds that it ignores possible future losses on commodities which are still in Commodity Credit Corporation inventories or under loan. Final disposition of a commodity by Commodity Credit Corporation may well occur several years after the commodity first entered the loan program. During the 10-year period used in these illustrations price support activity was increasing very rapidly. As a result the value of commodities in Commodity Credit Corporation price support inventories and under loan at the end of the period was substantially greater than at the beginning. The existence of these large stocks raises the possibility that Commodity Credit Corporation may realize substantial losses in future years when these stocks are disposed of. The Commodity Credit Corporation establishes a reserve for future losses on such stocks. Therefore, one way to take account of possible future losses in this type of calculations would be to add the reserves for losses at the end of the period to the realized costs for the 10-year period.

If similar calculations were made for later periods it would, of course, be necessary to subtract out the reserves and replace them with reserves at the end of whatever period was used.

Future effects on parity prices

The increases and decreases indicated above result from the use of the data for this specific period. If this same method were used in the future the effect on specific commodities would depend on the future costs of programs for specific commodities. For example, the large losses on potatoes occurred in the late 1940's. As these years drop out of the 10-year average the effect of this adjustment on parity prices of potatoes would decline unless new programs for potatoes resulted in substantial losses in years ahead.

On the other hand, price-support losses for many commodities for recent years are substantially higher than the average for the 10-year period included here. If this situation continues for the next few years, the average per unit costs for some commodities such as wheat, cotton, corn, etc., can be expected to increase as the 10-year average is moved forward, and modified parity prices of these commodities would drop relative to others.

In addition, the inclusion of costs of programs which either have gone into effect since June 30, 1956, or which will result in substantially greater expenditures during the next few years will also have an important bearing on the cost of programs for specific commodities in the immediate future. The acreage reserve program of the soil bank is an example of the former and sales for foreign currency under title I of Public Law 480 of the latter.

TABLE 5.—Approximate modernized parity prices on 1947-56 base period as calculated and as modified to exclude realized costs of price stabilization programs Dec. 15, 1956

Commodity	Unit	Parity prices Dec. 15, 1956, 1947- 56=100 ¹	Average cost per unit marketed of price stabilization 1947-56 fiscal years ²	Average prices received less average cost per unit marketed ³	Parity prices 1947-56=100 modified to exclude costs of price stabilization programs ⁴
Cotton, American upland	Pound	\$0.3549	\$0.0007	\$0.3310	\$0.3608
Wheat	Bushel	2.24	.15	1.94	2.11
Rice	Hundredweight	5.53	.04	5.13	5.59
Corn	Bushel	1.65	.04	1.50	1.64
Peanuts	Pound	.118	.009	.101	.110
Butterfat ⁵	do	.709		.638	.695
Milk, wholesale ⁶	Hundredweight	4.63		4.17	4.55
Barley	Bushel	1.31	.04	1.18	1.29
Beans, dry edible	Hundredweight	9.01	.43	7.99	8.71
Cottonseed	Ton	69.00	3.14	61.40	66.90
Flaxseed	Bushel	4.35	.42	3.65	3.98
Oats	do	.840	.013	.772	.841
Sorghums for grain	Hundredweight	2.55	.27	2.11	2.30
Eggs	Dozen	2.458	.006	.422	.460
Potatoes	Hundredweight	2.36	.26	1.95	2.13
Oranges ⁶	Box	1.65	.03	1.51	1.65
Raisins, dried	Ton	179.00	11.70	155.00	169.00
Prunes, dried	do	217.00	11.50	192.00	209.00
Cattle, beef	Hundredweight	21.50		20.10	21.90
Hogs	do	21.00		19.60	21.40
Chickens, all	Pound	.274		.256	.279

¹ Average prices divided by the 1947-56 average of the index of prices received, 1947-56=100 (100) and the results multiplied by the index of prices paid, including interest, taxes, and farm wage rates, 1947-56=100 (107).

² Average realized cost of programs, 1947-56 fiscal years, divided by the average sales off farms, 1946-55 crop years, unless otherwise noted.

³ Average prices less the average cost per unit marketed shown in col. 2.

⁴ Average prices shown in col. 3 divided by the 1947-56 average of the index of prices received adjusted to exclude realized costs of price stabilization programs (98) and the results multiplied by the index of prices paid, including interest, taxes, and farm wage rates, 1947-56=100 (107).

⁵ Cost of programs for dairy products represents 3.7 percent of cash receipts from farm marketings of milk and cream, wholesale (\$3,752.9 million). This percentage was used to reduce prices to level shown in col. 3.

⁶ Prices refer to equivalent on-tree returns for all methods of sale.

Source: Based on December 1956 issue of Agricultural Prices.

In summary, on a realized cost basis the 10-year average cost of programs for price stabilization will probably increase during the next few years. Acreage reserve payments and the excess of CCC investment over estimated market value of commodities exported under title I of Public Law 480 will be net additions to the 10-year total. In addition, realized losses of CCC on price support operations are running at a substantially higher rate than during the early part of the 10-year period.

Certainly actions taken to support prices of some commodities have tended to hold their parity prices at a higher level than would have otherwise been the case. But the Congress, of course, has generally recognized this in providing for price-support activities. Further, the current parity formula is derived from statistics which measure prices actually received and prices and service rates actually paid by farmers. Such an adjustment would depart from this simple rule.

E. PARITY INCOME FORMULAS

There are several approaches to a parity formula which involve parity income and parity prices derived from parity income. Those who propose the use of an income formula emphasize that parity

prices designed to maintain per unit purchasing power of farm products as compared with some earlier period may not reflect adequate incomes and living standards for farm people. This is especially to the point when the parity price base period is far back in the past, as in the current parity system, and significant changes have occurred in the volume of farm products moving to market and in the costs of producing them.

Congress has given some consideration to these suggestions including a definition of parity income in the Soil Conservation and Domestic Allotment Act of 1936 which was revised in the Agricultural Act of 1938 and replaced with another, substantially different definition in the Agricultural Act of 1948. The Congress has not, however, discontinued the parity price formula nor directed that general concepts of parity income should be substituted for parity prices as an actual operating standard.

The idea of parity income centers on the relation between incomes of farm people and incomes of nonfarm people. Generally, there are two basic approaches to the problem of determining parity income. One involves the maintenance of a historical income ratio which would provide for farmers' incomes and opportunities for a rising standard of living to grow at the same rate as others. The alternative approach would establish the standard of equal incomes or equal living standards as between farmers and others. Both approaches have appeared in the farm legislation relating to income parity. These alternatives lead to a wide range in results. Historical incomes ratios as between farm and nonfarm persons on which the two earlier parity income definitions were based indicate that incomes in agriculture in recent years were about at or above parity as compared with 1910-14. On the other hand, direct income comparisons tend to show that farm income falls far short of the nonfarm level, although there are considerable questions as to the meaning of measures of this kind.

Parity income based on historical income ratios

Examples of the historical income ratio approach include the early definitions of income parity in the Soil Conservation and Domestic Allotment Act of 1936 and the Agricultural Adjustment Act of 1938.

A declared purpose of the 1936 act was the "reestablishment, at as rapid a rate as the Secretary of Agriculture determines to be practicable and in the general public interest, of the ratio between the purchasing power of the net income per person on farms and the income per person not on farms that prevailed during the 5-year period August 1909-July 1914, inclusive, as determined from statistics available in the United States Department of Agriculture and the maintenance of such ratio."

The Agricultural Adjustment Act of 1938 provided that "parity, as applied to income, shall be that per capita net income of individuals on farms for farming operations that bears to the per capita net income of individuals not on farms, the same relation as prevailed during the period from August 1909 to July 1914."

Both of these definitions related to income ratios that existed in the same time period as the base period established for determining parity prices, the 5 years 1910-14.

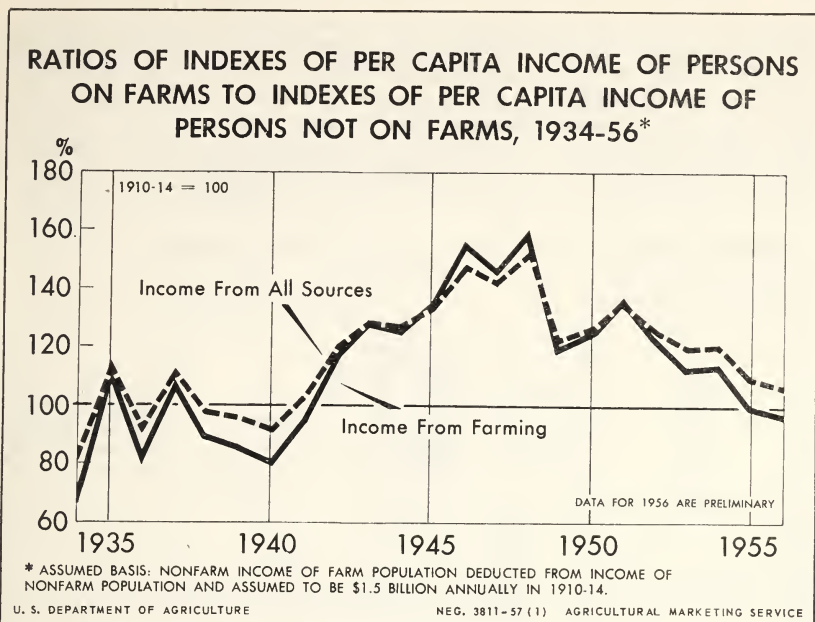


Table 6 shows the available data on income per person living on farms from all sources, nonfarm as well as farm, and income per person not living on farms, from 1910 to 1956, as published regularly by the Department. It should be noted that estimates of nonfarm income received by farm people, such as wages or salaries from nonfarm occupations, are not available prior to 1934. However, for purposes of indicating, in table 7, at least roughly, how income ratios in recent years compared with the 1910-14 period, we have made an assumption that nonfarm income received by farm people in the 1910-14 period totaled \$1.5 billion annually. This assumption is based on the probability that poorer transportation in those days restricted nonfarm job opportunities to farm people as compared with recent years.

The chart compares income ratios based on the 1910-14 base period, illustrating the definitions involved in the acts of 1936 and 1938 as follows:

(1) Ratios of per capita net income of the farm population from farming to per capita net income of the nonfarm population (1938 legislation). The data for 1956 indicate that the income ratio of farm people to nonfarm people was about the same as in the 1910-14 period, ranging from slightly above the pre-World War I base to slightly below, depending on whether or not income of the nonfarm population is adjusted to exclude nonfarm income received by farm people.

(2) Ratios of per capita net income of the farm population from all sources to per capita net income of the nonfarm population (1936 legislation). Assuming income from nonfarm sources averaged \$1.5 billion annually in 1910-14, this series indicates that the 1956 income ratio was 8 percent higher than in the 1910-14 period. However, a considerable range is actually involved, depending on the assumption

made with respect to nonfarm income of farm people in the base period. If the size of that income is assumed to total \$2 billion for the 1910-14 average, which would imply approximately the same rate of farmers' participation in nonfarm activities as in recent years, the 1956 income ratio would be 2 percent lower than in the 1910-14 period. On the other hand, if farmers' participation in nonfarm activities was even less than first assumed, and nonfarm income was only \$1 billion for the 1910-14 average, the 1956 income ratio would be 20 percent higher.

TABLE 6.—Average per capita net income by residence and by source of income, 1910-56

Year	Average net income per capita of—					
	Farm population				Nonfarm population from all sources	Total population from all sources
	From agriculture	From nonfarm sources	From all sources			
			Amount	Percent of nonfarm		
1910.....	\$147					\$360
1911.....	121					345
1912.....	154					367
1913.....	132					386
1914.....	145					368
1915.....	148					384
1916.....	157					443
1917.....	278					529
1918.....	305					567
1919.....	322					643
1920.....	282					711
1921.....	129					546
1922.....	158					554
1923.....	187					640
1924.....	182					624
1925.....	243					659
1926.....	220					268
1927.....	215					665
1928.....	224					676
1929.....	230					715
1930.....	166					613
1931.....	129					484
1932.....	80					345
1933.....	93					323
1934.....	106	\$59	\$165	35.3	\$468	391
1935.....	182	62	244	47.2	517	448
1936.....	156	72	228	38.5	592	502
1937.....	216	80	296	46.1	642	558
1938.....	165	74	239	40.6	589	506
1939.....	168	81	249	39.8	626	537
1940.....	174	88	262	38.2	685	588
1941.....	246	103	349	42.4	823	715
1942.....	379	130	509	49.2	1,034	920
1943.....	497	157	654	52.7	1,240	1,126
1944.....	524	172	696	52.4	1,328	1,211
1945.....	554	166	720	54.9	1,312	1,205
1946.....	631	162	793	61.3	1,294	1,200
1947.....	641	181	822	59.0	1,393	1,286
1948.....	761	197	958	62.8	1,526	1,425
1949.....	564	201	765	51.0	1,500	1,372
1950.....	617	211	828	52.6	1,575	1,451
1951.....	745	232	977	56.0	1,745	1,625
1952.....	702	251	953	52.0	1,833	1,697
1953.....	665	265	930	49.6	1,875	1,741
1954.....	650	260	911	49.8	1,828	1,704
1955.....	606	275	881	45.5	1,935	1,793
1956 ¹	605	288	893	44.4	2,009	1,861

¹ Tentative estimate; to be revised in Mar. 5, 1957 Farm Income Situation.

TABLE 7.—*Illustrative per capita income parity ratios of farm population to nonfarm population, as defined in agricultural legislation of 1936 and 1938, 1934-56*

[1910-14=100]

Year	Ratio of per capita income of farm population to per capita income of nonfarm population		Year	Ratio of per capita income of farm population to per capita income of nonfarm population	
	Income to farm people from farming only (1938 legislation)	Income to farm people from all sources (1936 legislation)		Income to farm people from farming only (1938 legislation)	Income to farm people from all sources (1936 legislation)
1934.....	74	85	1946.....	159	149
1935.....	115	115	1947.....	150	144
1936.....	85	94	1948.....	162	153
1937.....	109	112	1949.....	122	124
1938.....	91	99	1950.....	128	128
1939.....	88	97	1951.....	139	136
1940.....	83	93	1952.....	125	127
1941.....	98	104	1953.....	116	121
1942.....	119	120	1954.....	116	121
1943.....	131	129	1955.....	102	111
1944.....	129	128	1956 ¹	98	108
1945.....	138	134			

¹ Tentative estimates; to be revised Mar. 5, 1957.

NOTE.—Assumes nonfarm income of farm population averaged \$1.5 billion in the base years 1910-14. No reliable estimate of such income is available for that period.

The index or ratio which compares income of farm people from all sources with income of nonfarm people appears to be more appropriate as a measure of farm well-being than the ratio including only the income of farm people from farming. Nonfarm income is becoming increasingly important as a source of income to farm people and as a means of maintaining or increasing living levels.

It should be noted also that comparison of these ratios need not be limited to the 1910-14 base period. If for example, the last 10 years (1947-56) were considered as the base period, the ratio involving income per person on farms from farming would be 22 percent under the base average ratio, and the ratio involving income per person on farms from all sources some 15 percent lower. The parity price ratio for 1956 was also 15 percent under the 1947-56 average.

Finally, in considering the appropriateness of historical income ratios, the comparison can involve other series such as earnings in agriculture as compared with earnings in selected other occupations, which are shown in table 8 from 1929 to 1956. For example, the ratio of hourly earnings in agriculture, after allowance for capital investment, to hourly earnings in manufacturing could be used in place of an income ratio.

Direct comparisons, farm and nonfarm

The alternatives relating to direct standard of living or income comparisons between farm and nonfarm people present unusual and difficult problems of measurement and of interpretation. For example, the Agricultural Act of 1948 defined parity income, effective January 1, 1950, as "Parity, as applied to income, shall be that gross income from agriculture which will provide the farm operator and his

family with a standard of living equivalent to those afforded persons dependent upon other gainful occupation. 'Parity' as applied to income from any agricultural commodity for any year, shall be that gross income which bears the same relationship to parity income from agriculture for such year as the average gross income from such commodity for the preceding 10 calendar years bears to the average gross income from agriculture for such 10 calendar years."

This Department has not been in a position to bring statistical meaning to this definition. The determination of equivalent standards of living involves much more than equivalent dollar incomes. A family's well-being depends not only on income but also on other factors such as the accumulation of assets and consumer goods over the years, the availability of adequate health and educational facilities, and such intangible factors as are involved in evaluating life in the country versus life in the city. It is noteworthy that indexes developed to measure changes in levels of living of farm operator families indicate that there has been persistent improvement each year in farm operator family level of living since 1951 despite declines in farm income during most of that period.

TABLE 8.—Average hourly earnings in agriculture and in selected industries, 1929-56

Year	Workers in agriculture		Production workers in industry ³							
	Realized return per hour to all farm labor and management after allowance for capital investment ¹	Composite hired farm wage rate per hour	Manufacturing	Bituminous coal mining	Building construction	Class I railroads	Telephone	Wholesale trade	Retail trade (except eating and drinking places)	Laundries
1929	\$0.259	\$0.241	\$0.566	\$0.681						
1930	.172	.226	.552	.684						
1931	.093	.172	.515	.647						
1932	.055	.129	.446	.520						
1933	.106	.115	.442	.501						
1934	.172	.129	.532	.673	\$0.795					
1935	.203	.142	.550	.745	.824					\$0.378
1936	.232	.152	.556	.794	.891					.376
1937	.221	.172	.624	.856	.903		\$0.774		\$0.648	.378
1938	.187	.166	.627	.878	.908		.816		.667	.395
1939	.199	.166	.633	.886	.932	\$0.730	.822		.700	.414
1940	.200	.169	.661	.883	.958	.733	.827		.739	.422
1941	.315	.206	.729	.963	1.010	.743	.820		.783	.429
1942	.444	.268	.853	1.059	1.148	.837	.843		.860	.444
1943	.598	.353	.961	1.139	1.252	.852	.870		.933	.482
1944	.609	.423	1.019	1.186	1.319	.948	.911		.985	.538
1945	.674	.472	1.023	1.240	1.379	.955	.962	1.029	.731	.605
1946	.828	.515	1.086	1.401	1.478	1.087	1.124	1.150	.783	.648
1947	.983	.547	1.237	1.636	1.681	1.186	1.197	1.268	.893	.704
1948	.918	.580	1.350	1.898	1.848	1.301	1.248	1.359	1.009	.767
1949	.777	.559	1.401	1.941	1.935	1.427	1.345	1.414	1.137	.817
1950	.799	.561	1.465	2.010	2.031	1.572	1.398	1.483	1.176	.861
1951	.874	.625	1.519	2.21	2.19	1.73	1.49	1.58	1.26	.92
1952	.825	.661	1.67	2.29	2.31	1.83	1.59	1.67	1.32	.94
1953	.803	.672	1.77	2.48	2.48	1.88	1.68	1.77	1.32	.98
1954	.709	.661	1.81	2.48	2.60	1.83	1.76	1.83	1.40	1.00
1955	.951	.675	1.88	2.56	2.66	1.95	1.82	1.91	1.45	1.01
1956	2.703	.705	1.98	2.79	2.79	2.11	1.86	2.01	1.57	1.05

¹ Derived in table 10.² Tentative estimate; to be revised Mar. 5, 1957.³ Economic Report of the President, January 1957, p. 149.

Direct comparison of per capita incomes.—Table 6 indicates that the average net income per capita of the farm population in 1956 was about \$900 compared with some \$2,000 per nonfarm person. Questions have been raised as to whether or not the average per capita income of farm people would need to be increased by about \$1,100 to attain equal standard of living with the average nonfarm person.

Some questions relate to the valuation of food and housing furnished by the farm. The farm income estimates of the Department value food furnished by the farm at prices received by farmers for similar products sold. In recent years the farmers' share has been less than half of the consumers' retail food dollar. A number of analysts have suggested that such food should be valued in terms of the retail price level. This would have the effect of more than doubling the value of food included in farm income and would increase the per capita income of persons in farm operator families by a little more than \$100. There is considerable controversy over this suggestion. Certainly the food furnished by the farm is not delivered to the family kitchen, in the same condition as food purchased in the retail store. There is considerable difference in the state of preparation between the live farm chicken and the broiler in the retail store, cleaned, cut up, and packaged ready for cooking.

With respect to housing furnished by the farm, the Department's estimates include an allowance based on the value of the farm dwelling and covering taxes, insurance, interest, maintenance, and depreciation. In recent years this allowance averaged approximately \$300 per farm dwelling, or about \$25 a month. Since the average nonfarm rental runs about \$50 a month, there have been questions raised as to whether the allowance for the farm dwelling is not too conservative. But, it is very clear that housing on the farm is substantially different than housing in the city. For example, in 1949 over two-thirds of all farm dwellings did not have indoor toilet facilities; two-thirds had no installed bathtub or shower; and one-half used coal or wood for cooking purposes. While undoubtedly some progress has occurred in the intervening period, this is still a common situation. It would be difficult to find housing of this sort in most urban areas, and even more difficult to ascribe a value to it.

It is recognized, however, that part of the difference between the United States averages of farm and nonfarm income reflect the fact that a considerable part of the farm population is concentrated in the South where incomes and prices are generally lower than in the North where industrial workers are concentrated. Tests, with the limited data at hand, indicate that if the comparison between farm and nonfarm incomes were carried through on a State-by-State or regional basis, the gap in the United States averages might be reduced as much as 20 to 25 percent.

TABLE 9.—Average per capita income from all sources of farm and nonfarm population groups, 1949

<i>Population group</i>	<i>Per capita income</i>
Commercial farm families-----	\$877
On class I farms ¹ -----	3,655
On class II farms ² -----	1,684
On class III farms ³ -----	1,086
On class IV farms ⁴ -----	739
On class V farms ⁵ -----	582
On class VI farms ⁶ -----	369
Noncommercial farm families-----	653
On part-time farms ⁷ -----	706
On residential farms ⁸ -----	619
All farm-operator families-----	811
All persons living on farms-----	765
Persons not living on farms-----	1,500

¹ With farm products sold valued at \$25,000 or more.² Sales from \$10,000 to \$24,999.³ Sales from \$5,000 to \$9,999.⁴ Sales from \$2,500 to \$4,999.⁵ Sales from \$1,200 to \$2,499.⁶ Sales from \$250 to \$1,199 with operator working off the farm less than 100 days in 1949 and total family income from off-farm sources less than value of farm products sold in 1949.⁷ Sales from \$250 to \$1,199 with operator working 100 or more days off the farm in 1949 or total family income from off-farm sources more than value of farm products sold in 1949.⁸ Sales less than \$250.

Source: Farm Income Situation, No. 159 (July 1956), p. 24, and Agricultural Economics Research, vol. VIII, No. 2 (April 1956), p. 54.

Adjustments of this nature, the revaluation of farm-furnished food and housing and the adjustment for geographical location, could operate to reduce the average gap between farm and nonfarm incomes from about \$1,100 to perhaps \$700. Even after these adjustments, all subject to considerable question, close to \$16 billion would be required to close the net income gap for the more than 22 million persons living on farms in 1956. Without adjustments, the gap totals some \$24 billions.

Some pertinent questions are raised also as to what part of the farm population should be represented in the income comparison and how that might affect the disparity in income. The Agricultural Act of 1948 limits the farm group compared to persons in farm operator families as distinct from farm laborers and others living on farms not part of farm operator families. Total net income data (farm and non-farm sources) for persons in farm operator families as distinct from all persons living on farms are available only for 1949, the results of bringing together information for the same farm families from the the censuses of agriculture and of population to provide a basis for estimating farm operator family total income. Table 9 indicates that for that year, the total net per capita income from all sources of persons in farm operator families averaged \$811 compared with \$765 for all persons living on farms and \$1,500 for the average nonfarm person. Thus, with almost 22 million persons in farm operator families in 1949, about \$15 billion additional to the \$17½ billion actually received would have been required in 1949 to provide the same dollar income as the average nonfarm person, exclusive of the kinds of adjustment for food, housing, or geographical location discussed previously. This compares with a total gap of about \$19 billion for that year for

all persons living on farms which would require almost a doubling of the net income actually received.

Suggestions have also been made that parity income should be developed for commercial farm operators as distinct from all farm operators since price parity is largely the concern of commercial farms which sell 98 percent of the farm products moving to market. In 1949, persons in commercial farm operator families accounted for approximately two-thirds of the total farm population as compared with almost 95 percent in all farm operator families.

Commercial farms have been defined in the 1950 census of agriculture to include all farms with a value of sales of farm products amounting to \$1,200 or more and farms with a value of sales of \$250 to \$1,199 if the farm operator worked off the farm less than 100 days and the income of the operator and members of his family received from nonfarm sources was less than the total value of all farm products sold. Because the latter group with sales of less than \$1,200 accounted for only 2 percent of the total sales of farm products, some have suggested that this group should not be included in the commercial farm category. This would have had the effect of reducing the number of persons in commercial farm operator families to a little more than half of the total farm population.

The effect on income levels of these successive reductions in coverage, which have been suggested in defining the farm population group, is indicated for 1949:

Per capita income by selected groups of farm people, 1949

Group	Average per capita income from all sources, 1949	Percent of farm population
All persons living on farms.....	\$765	100
All persons in farm operator families.....	811	94
All persons in commercial farm operator families as defined in the 1950 Census of Agriculture.....	877	66
All persons in commercial farm operator families, excluding those with value of sales less than \$1,200.....	987	54

Thus, the disparity in income as compared with the \$1,500 average per capita income of nonfarm persons in 1949 is successively reduced as the several categories of farm population are considered. But an extremely difficult question arises, especially when the comparison departs from the broad one of persons living on farms compared with persons not living on farms, as to what nonfarm groups should appropriately be compared with the farm group selected. Farmers, especially commercial farmers, have capital investments and skills not readily comparable with nonfarm occupations.

It should be further emphasized, that at the present time estimates of farm population in farm operator families and in commercial farm operator families and estimates of per capita income for these categories are available only for 1949. While some data for recent years will likely be forthcoming in the next several years from research now under way, it would be impossible to extend such data back of 1949.

Direct comparison of earnings.—An alternative to a standard that implies equality in per capita incomes, concerns average earnings in agriculture as against earnings in other occupations. Suggestions

in this category develop from a standard involving the same rates of return to farm work and to farm investment as are received in the nonfarm economy. In appraising the difference between these approaches, it should be noted that per capita incomes allow for the fact that in many instances family members receive income from outside jobs and that the average farm family is larger than the average nonfarm family.

Table 10 develops estimates of the realized return per hour to all farm labor and management after allowance for a rate of return for capital at 4¼ percent, a rate that approximates the interest rate on farm mortgage debt in recent years.⁷ The estimates of man-hours

TABLE 10.—*Estimated return per hour to all farm labor, 1929-56*

Year	Total realized return to all farm labor and capital ¹	Allowance for capital at 4¼ percent ²	Total return to labor and management ³	Total man-hours required for agricultural production ⁴	Realized return per hour to all farm labor and management ⁵
	(1)	(2)	(3)	(4)	(5)
	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. hr.</i>	
1929.....	8,982	2,977	6,005	23,158	\$0.259
1930.....	6,908	2,955	3,953	22,921	.172
1931.....	4,775	2,603	2,172	23,427	.093
1932.....	3,419	2,179	1,240	22,605	.055
1933.....	4,209	1,819	2,390	22,554	.106
1934.....	5,407	1,926	3,481	20,232	.172
1935.....	6,261	1,991	4,270	21,052	.203
1936.....	6,889	2,138	4,751	20,440	.232
1937.....	7,080	2,203	4,877	22,097	.221
1938.....	6,047	2,206	3,841	20,577	.187
1939.....	6,247	2,140	4,107	20,680	.199
1940.....	6,245	2,157	4,088	20,443	.200
1941.....	8,553	2,241	6,312	20,049	.315
1942.....	11,831	2,566	9,265	20,849	.444
1943.....	15,386	3,013	12,373	20,682	.598
1944.....	15,871	3,404	12,467	20,482	.609
1945.....	16,604	3,724	12,880	19,108	.674
1946.....	19,303	4,061	15,252	18,423	.828
1947.....	21,849	4,559	17,290	17,593	.983
1948.....	20,765	5,044	15,721	17,116	.918
1949.....	18,175	5,299	12,876	16,563	.777
1950.....	17,367	5,198	12,169	15,227	.799
1951.....	19,713	6,053	13,660	15,632	.874
1952.....	19,293	6,723	12,570	15,241	.825
1953.....	18,675	6,542	12,133	15,102	.803
1954.....	16,704	6,319	10,385	14,642	.709
1955.....	16,023	6,506	9,517	14,609	.651
1956 ⁶	16,666	6,634	10,032	14,268	.703

¹ Includes realized net income of farm operators, wages to hired farm labor, farm mortgage interest, rent to nonfarm landlords and short-term interest.

² 4¼ percent of current value of farm real estate, inventory value of crops and livestock, inventory value of motor vehicles and machinery, excluding 60 percent of the automobile, and an allowance for working capital. This rate approximates the interest rate on farm-mortgage debt in recent years.

³ Col. (1) minus col. (2).

⁴ Labor requirements in terms of the number of man-hours required for an average adult male worker to perform the various farm jobs.

⁵ Col. (3) divided by col. (4).

⁶ Tentative estimate; to be revised Mar. 5, 1957.

are in terms of labor requirements of average adult male workers to perform the various farm jobs. Thus, the return per hour for farm-work includes hired labor as well as that of the farm operator and members of his family. In 1956, the return per hour in agriculture calculated on this basis was about 70 cents per hour. As noted in table 8, which compares hourly earnings in agriculture and selected industries, the composite hired farm wage rate in 1956 was about the

⁷ Some suggest that the rate of return for capital should more appropriately be established at the rate of earnings of nonfarm capital which, in recent years, is closer to 10 percent. However, the 4¼ percent mortgage rate is not generally different from current dividend rates.

same as the return to all farm labor and management. The rate of 70 cents per hour in agriculture compares with an average hourly rate of \$1.98 for production workers in manufacturing and a range for the selected industries from \$1.05 in laundries to \$2.80 in bituminous coal mining.

The comparison of rates of returns is subject to the same kinds of considerations relating to the possible revaluation of farm furnished food and housing and allowance for differences resulting from geographical location discussed previously. However, it should also be noted that the hourly returns data for industry do not include so-called fringe benefits which the Chamber of Commerce of the United States estimates amounted to about 38 cents per hour worked in manufacturing in 1955.⁸

Thus, some would suggest that, leaving aside such considerations of adjustment, about \$1.98 per hour for farmwork would be the appropriate parity standard for 1956. There is a real question as to whether work on the farm and in the factory should be considered comparable, noting the skills, managerial function and risks of the farm operator as against those of the production worker in industry. Nevertheless, this basis of comparison suggests that the disparity in returns in agriculture totaled about \$18 billion for all farmwork compared with a total of about 10 billion estimated as received after allowing for the return to capital. For farm operator and other family labor alone, the gap might well total about 13 billion.

If this much additional income were provided, land values would undoubtedly rise sharply. This would bring about an increased allowance for interest on investment in the computation of the desired income level for a subsequent period. The income goal might therefore continue to run ahead of actual income despite increasing Government assistance. Further, the above calculations include no estimate or allowance for increases in prices and cost rates charged to farmers in case actual means were at hand for bringing about such sharp increases in income. Obviously, there would be increases and thus would further widen the estimated gap.

Either direct comparison approach, therefore, whether based on incomes or on earnings, implies that the parity standard for agriculture is very substantially above the levels actually experienced in recent years, or in fact in any year as far back as the records for such measurements exist. For recent periods, they imply that net income or hourly earnings would require doubling or more to attain a parity income based on equivalent dollar incomes or dollar earnings with industry.

Parity prices derived from parity income formulas

Finally, there remains the problem of how an income formula, if a satisfactory one could be developed, can be used. On the one hand, the formula could be a general guide in assessing the economic position of farm people, much as the general desire for improving farm family living standards has always been a general guide or goal. The more important question, however, is whether it is proposed to use such estimates or calculations as actual operating guides. Shall parity income estimates, however made, be translated into a set of commodity prices to replace those now provided by the wholly different parity price formula?

⁸ Fringe Benefits, 1955, Chamber of Commerce of the United States, 1956, p. 10.

To derive a set of parity prices from an aggregate net income standard, the general approach is to add to the estimated net parity income an estimate of the expenses of farm production to indicate the gross farm income which farmers would need to realize from the sale or use of farm products to attain income parity. A deduction should be made for direct Government payments to be made to farmers during the year, such as soil-bank payments. Where the standard is based on per capita incomes, it seems clear also that allowance should be made for income received by farm people from nonfarm sources in determining the parity income. Next, this gross farm income would need to be apportioned among the several commodities according to some prescribed formula, and a set of specific production or sales estimates would be used to derive the specific commodity prices necessary to yield that level of gross farm income. Most proposals involve the use of production or sales estimates for a recent period. Therefore, with production or sales established, the level of gross farm income consistent with parity income, in effect, determines the prices farmers would need to get to attain parity income.

To illustrate roughly how commodity parity prices might be determined, it is assumed that the parity income definition involves returns per hour for farm work equivalent to the rates received by workers in manufacturing. As noted earlier, the difference between 70 cents per hour in agriculture and \$1.98 per hour in manufacturing involves a total gap of some \$18 billion to equalize returns in 1956. Gross farm income, which was about \$33 billion, exclusive of direct Government payments, in 1956, would therefore need to be increased to at least \$51 billion. This would involve raising farm-product prices that were realized in 1956 proportionately, or a minimum of some 55 percent. Further, inasmuch as the higher levels of farm prices, if attained, would mean higher costs in farm production, especially for feed and livestock purchased but also from the impact of higher farm prices on the economy generally, gross farm income and parity prices would need to be raised still more by an indeterminate amount.

It should be noted also that to establish parity prices on this basis for a current year, i. e., 1957, would, strictly speaking, require advance estimates of parity net income, anticipated farm production and the man-hours of farm work required for that production as well as the estimated costs of production. At the very least, this would present some very real statistical difficulties and involve a substantial margin of error. The alternative is to fall back on parity prices so determined for the previous year or some other preceding period.

Currently, with respect to this problem of allocating parity income as between commodities for price or operating purposes the Agricultural Act of 1948 provides:

"Parity," as applied to income from any agricultural commodity for any year, shall be that gross income which bears the same relationship to parity income from agriculture for such year as the average gross income from such commodity for the preceding ten calendar years bears to the average gross income from agriculture for such ten calendar years.

Similar difficulties are involved in a parity-price system determined from a historical earnings or income ratio. The latter, in addition, would require advance estimates of the nonfarm income to be received by farm people. Inasmuch as the longtime trends in income and earn-

ings of farm people do not depart substantially from those of nonfarm people except under unusual circumstances, the level of parity prices would probably not be affected as violently as indicated by the direct income or earnings comparison. Thus, for 1956, the income ratio was apparently the same or somewhat higher than that in 1910-14. This suggests that the parity prices that would derive from a parity income formula based on this relationship would be those prices that actually prevailed in 1956, or somewhat lower prices. In 1956, farm-product prices averaged some 17 percent below the parity-price level determined from the price formula now in effect.

One proposal concerns parity prices determined from parity incomes established for specific type of farming areas, based on historical data on costs and returns for typical commercial family operated farms developed by the Agricultural Research Service, United States Department of Agriculture, for a number of such areas. The guiding definition of parity would be the maintenance of the ratio of farm-operator returns per hour to average hourly earnings in manufacturing in a pre-World War II period, and parity prices of farm products would be adjusted to yield such income for prevailing patterns of production. Much the same criticisms as have been directed at separate parity indexes for individual commodities apply with equal force to this proposal. Variation among different types of farming areas producing the same commodity may result in a wide range in the parity prices so derived. Further, sufficient data are not available to give adequate coverage to areas and commodities to insure a complete parity price system.

Finally, it should be emphasized that price parities evolved from income parity have very limited significance for those farm operators who have little to sell. Data from the 1954 Census of Agriculture show that close to 2 million farmers, or 40 percent of all farmers, sold less than \$1,200 farm products. For this group, parity prices for farm products would not mean an adequate level of income or of living. Their prospects for participating in the Nation's economic gains depend much more on other factors, such as opportunities to acquire adequate land, sufficient capital, improved skills, or suitable nonfarm employment.

Further, if such a formula could be made effective in increasing farmers' incomes, the biggest gains would go to the larger, more efficient farmers who now have substantial incomes. The table below indicates that among commercial farms, that is, those who depend very largely on farm production, the average value of products sold by 134,000 large scale farms would be increased almost \$30,000 while the average increase for 462,000 small-scale farms would be less than \$400.

Calculated effect on different classes of commercial farms of supporting prices at levels computed to give farmers parity income

Commercial farms	Number of farms ¹	Average sales of farm products per farm	
		Actual, 1954 ¹	Computed at prices calculated to give parity income ²
Class I, large scale.....	134,000	\$57,968	\$87,300
Class II, large family scale.....	449,000	14,887	22,420
Class III, upper-medium family scale.....	707,000	7,193	10,833
Class IV, lower-medium family scale.....	812,000	3,705	5,580
Class V, small family scale.....	763,000	1,852	2,789
Class VI, small scale.....	462,000	756	1,139

¹ From the Census of Agriculture.

² Parity income based on equal hourly returns to agriculture as in industry, after allowance for capital investment.

Thus, the realization of income parity through parity prices would not solve the problem of inadequate incomes and low living levels for those who are presently in that situation. Rather, it would widen the gap as between that group and others in agriculture. While we need to keep in mind the primary objective of improving farm living standards, we need also to recognize where the greatest needs for improvement are.

APPENDIXES

APPENDIX A

INDEX NUMBERS AND BASIC PRICE DATA USED IN COMPUTING PARITY PRICES

The publication of the index number series used in computing parity prices antedated the concept of parity, and in fact contributed substantially to the development of the idea of parity prices for agricultural commodities. These index number series are two in number, namely: 1. The Index of Prices Received by Farmers. 2. The Index of Prices Paid by Farmers, for Commodities and Services, including Interest, Taxes, and Wage Rates. Over the years, they have had and currently retain, a well recognized status as economic measures quite independent and apart from their use in the formal calculations of parity prices.

The Index of Prices Received has been developed, through several revisions, from a simple measure of average change in prices first published in 1909. The Index of Prices Paid by Farmers (in its several variants) derives from an index first published in 1928 by the Bureau of Agricultural Economics, using 1910-14 as the base period. Both these indexes have been revised from time to time as new, better, or more up-to-date information became available. That policy is being continued.

Under the modernized parity formula, both the Index of Prices Received by Farmers for commodities sold and The Index of Prices Paid by Farmers for Commodities and Services, including Interest, Taxes, and Wage Rates are used in computing parity prices. Under the old parity formula, the unrevised Index of Prices Paid Including Interest and Taxes and the Index of Prices Paid (not including either interest or taxes) are used for certain groups of commodities, the former for those with a 1909-14 base and the latter for those with a post-World War I base period.

The Index of Prices Received by Farmers is a comprehensive index which represents products comprising currently more than 90 percent of the total cash receipts from the sale of farm products. It includes prices of 52 important commodities. The major items not represented are first, forest products such as stumpage, veneer logs, pulpwood, poles, fence posts and firewood; second, sales of deciduous fruits and commercial vegetables for processing; and third, flowers and nursery products. For most deciduous fruits and vegetables sold for processing, only annual data are available, and these not in time to use currently in an index. Prices for forest products, flowers and nursery products are not regularly collected. However, estimated receipts from these three classes of products only accounted for an estimated 3 percent of cash receipts from farm sales in 1955.

The Index of Prices Paid by Farmers for Commodities and Services, including Interest, Taxes, and Wage Rates is a comprehensive measure of the month to month and year to year changes in the general level of prices farmers pay for the goods and services used for living and production. Viewed from the standpoint of expenditures, it is a counterpart of the Index of Prices Received by Farmers in respect to receipts from sale of products.

The Index of Prices Paid by Farmers for Commodities and Services, Including Interest, Taxes, and Wage Rates is a revision (January 1950) of the previous ("old") parity index known as the Index of Prices Paid Including Interest and Taxes. The revised series is more up-to-date than the "old" index since it makes use of more recent weights, namely those for the period 1937-41, and since it includes nearly twice as many commodities as its predecessor. In addition, it includes an allowance for cash wage rates paid by farmers for farm labor. The revised parity index includes prices of about 330 commodities bought by farmers. The list does not by any means comprise all the commodities bought by farmers, but it does include substantial representation from most of the major groups of farm expenditures.

The major field not represented in this index consists of medical, dental, and hospital expenditures. On the basis of data from urban population groups, this type of expenditure represents perhaps 5 percent of the total expenditures of farm people for living purposes. Prices or rates charged for these services are not currently collected.

Another class of expenditures which it has not been possible to cover relates to prices paid for custom harvesting operations, and for various types of machinery repair services which are becoming more important with increasing mechanization. A few of the commodity categories are covered rather sparsely, probably the most important being containers used for handling and marketing farm products.

The index used prior to 1950 was The Index of Prices Paid Including Interest and Taxes. This index differs from the current revised index in respect to the weight period used, the exclusion of wage rates, and in being based on a much more limited list of commodities, only about 180 commodities in contrast with 330 for the new index. The period 1924-29 from which weights were derived is about a quarter of a century out of date. Commodities not included in this index include many which have become increasingly important in recent years. This index is used in computing transitional parity prices in response to the Conference Report on the Agricultural Act of 1949.

The individual price series used in compiling both the index of prices received by farmers and the various indexes of prices paid by farmers are based primarily on information collected by the Agricultural Marketing Service, formerly the Bureau of Agricultural Economics. The information is collected largely by mail from voluntary reporters, supplemented by considerable data furnished by marketing agencies, by data from a number of official sources, and to some extent by direct personal enumeration from original sources. The reporters who supply information on prices received by farmers for products sold consist primarily of dealers in farm products, country bankers, farmers, and others in rural areas who are believed to be informed concerning current prices of products. Much information is also secured from the larger cooperative marketing organizations, buyers, and handlers with respect to commodities which are marketed

primarily through such channels. In the case of wool, beginning with 1955 marketing year, access has been had to the applications for the incentive payments which are supported by actual sales documents. The prices represented in the prices received series in general relate to the first sale of the commodity by the farmer, which is generally the price at a local market, and rarely is the price at the farm. In the case of citrus fruits, the price series used are "equivalent returns at the packinghouse door," which are considered to be the most representative and meaningful for this class of commodity.

The individual price series for commodities bought by farmers are based primarily upon information secured by mail from merchants dealing in the various commodities. Thus, food price estimates are based primarily on reports from grocery stores in farming areas, prices of clothing are based primarily on reports from clothing stores in rural areas, etc. Historically, the index of prices paid has been based upon prices at independent stores but, with the increasing importance of chainstores in recent years, price series for food and some other items at chainstores have been incorporated in the index beginning in 1953. Facilities have not permitted the extension of the chainstore series to an earlier date nor have they permitted the development of series for prices paid at mail-order houses, which are an important source of purchase of commodities by farmers.

In the case both of the price series utilized for the index of prices paid and those utilized for the index of prices received, the price estimates usually relate to an average for all the commodity being sold or bought rather than to specific grades, classes, or sizes. For example, the price estimates relating to hogs refer to all hogs sold by farmers. Through the major part of the marketing season, sales by farmers consist primarily of barrows and gilts; but in the summer and early fall months, sales of sows comprise 50 percent or more of total sales at some markets. Thus, the average price received by farmers for hogs is considerably lower at this time of year than the prices received for barrows and gilts. Again, the estimates relating to beef-cattle prices refer not only to the steers and heifers which comprise the source of most of the better grades of beef, but also to the sale of cows, including discarded dairy stock, which comprise the commercial, cutters and canners, and other lower grades of beef. In other words, the price series refers to all cattle sold for beef and for stocker and feeder purposes, and not only to the steers and heifers which yield choice cuts.

In the field of commodities bought by farmers, the policy has been followed of using fairly broad rather than extremely narrow specifications. For example, the questionnaires ask for the average price per pound of coffee bought by farmers, it being assumed that shifts between brands of coffee or between various packs necessarily occur over the years and that farmers generally will seek the best value for their expenditure. To measure the average price per pound that farmers pay for coffee seems more pertinent to the economic measure of farm prosperity than to measure a price for some particular brand, packed in some particular way, which may be popular at one moment and out of date at another. Powdered or concentrated coffee is not presently

represented in the index. Of course, if this should be added, it would be treated as a different commodity from regular coffee and priced separately.

For commodities priced on an administered or semiadministered basis, many problems arise involving sales at other than the recommended price. Thus in the case of a number of commodities, notably, automobiles, farm machinery, washing machines, and electrical household appliances, a recommended price list is frequently provided by the manufacturer as a more or less rigorous guide for retail pricing. However, the actual price at which such commodities find their way to the consumer frequently differs sharply from the recommended price. In periods of shortage, as in time of war, purchasers may have to pay premiums in addition to the recommended price or they may find it necessary to buy an excessive number of "extras." During buyer's markets, many dealers have granted discounts in substantial amounts as competition becomes keen. The instructions on our questionnaires call for the actual price paid irrespective of the list price. It is probable that the reported prices understate the true average price paid during periods of shortage and that they may overstate somewhat the true average price in a buyer's market. These are areas in which it is difficult to obtain full and complete information, and with the limited facilities which have been available for this work, it has not been possible to extend personal enumerations to the extent that would make possible on an extensive basis the examination of individual bills of sale of these items sold to farmers.

The policy, as indicated above, has been to revise both the index of prices received and the parity index from time to time as circumstances warrant, particularly as new and improved price series become available, or as new information for weighting purposes is developed. The last revision for both major indexes, namely that of 1950 made use, for weighting purposes, of information representing the period 1937-41. Additional information concerning farmers' purchasing habits has not hitherto been available to bring them more nearly up to date. However, the Congress made special funds available during fiscal year 1956, and a nationwide survey was conducted in the spring of 1956 relating to farmer expenditure patterns for the calendar year 1955. Results of that survey are now being compiled. These results are expected to be used in a revision of the weighting pattern of the index of prices paid for commodities and services, including interest, taxes, and wage rates as soon as it is feasible to do so. It is contemplated also that the index of prices received will be revised at the same time so as to keep the two indexes on a comparable basis from the standpoint of formula, weighting, and base period.

The indexes used in computing parity prices for farm products, annually 1910-56

[1910-14=100]

Year	Old indexes ¹		Revised indexes ²	
	Prices paid for commodities	Prices paid for commodities, interest and taxes	Prices paid interest, taxes, and wage rates	Prices received by farmers
1910.....	98	96	97	104
1911.....	101	100	98	94
1912.....	100	100	101	99
1913.....	101	102	101	102
1914.....	100	102	103	101
1915.....	105	107	105	99
1916.....	124	125	116	119
1917.....	149	148	148	178
1918.....	176	173	173	206
1919.....	202	198	197	217
1920.....	201	202	214	211
1921.....	152	165	155	124
1922.....	149	164	151	131
1923.....	152	167	159	142
1924.....	152	167	160	143
1925.....	156	169	164	156
1926.....	154	167	160	145
1927.....	152	165	159	140
1928.....	154	167	162	148
1929.....	152	165	160	148
1930.....	145	159	151	125
1931.....	125	140	130	87
1932.....	108	124	112	65
1933.....	107	119	109	70
1934.....	121	128	120	90
1935.....	124	128	124	109
1936.....	123	127	124	114
1937.....	130	132	131	122
1938.....	123	126	124	97
1939.....	120	123	123	95
1940.....	122	124	124	100
1941.....	130	132	133	124
1942.....	151	150	152	159
1943.....	166	161	171	193
1944.....	175	168	182	197
1945.....	179	173	190	207
1946.....	201	192	208	236
1947.....	244	231	240	276
1948.....	262	250	260	287
1949.....	254	244	251	250
1950.....	261	252	256	258
1951.....	284	274	282	302
1952.....	289	280	287	288
1953.....	284	278	279	258
1954.....	286	281	281	249
1955.....	286	283	281	236
1956.....	289	288	286	236

¹ See text of appendix for significance of old and revised indexes.

² 1950 revision.

APPENDIX B

PARITY AND AVERAGE PRICES RECEIVED BY FARMERS FOR AGRICULTURAL COMMODITIES, JANUARY 1957

(Supplement to Agricultural Prices, January 30, 1957)

Parity prices as of January 15, 1957, for all commodities for which computed, together with base price data, are presented in the tables on pages 46-48. Annual average prices for 1947 through 1956 for use in parity computations and averages for 1946-55 and 1947-56 are shown on pages 49-55.

Parity prices shown on the following pages are computed under the provisions of title III, subtitle A, section 301 (a) of the Agricultural

Adjustment Act of 1938 as amended by the Agricultural Acts of 1948, 1949, 1954, and 1956.

The major provisions of the amended act relating to the calculation of parity prices are as follows:

(1) (A) The "parity price" for any agricultural commodity, as of any date, shall be determined by multiplying the adjusted base price of such commodity as of such date by the parity index as of such date.

(B) The "adjusted base price" of any agricultural commodity, as of any date, shall be (i) the average of the prices received by farmers for such commodity, at such times as the Secretary may select during each year of the ten-year period ending on the 31st of December last before such date, or during each marketing season beginning in such period if the Secretary determines use of a calendar year basis to be impracticable, divided by (ii) the ratio of the general level of prices received by farmers for agricultural commodities during such period to the general level of prices received by farmers for agricultural commodities during the period January 1910 to December 1914, inclusive. As used in this subparagraph, the term "prices" shall include wartime subsidy payments made to producers under programs designed to maintain maximum prices established under the Emergency Price Control Act of 1942.

(C) The "parity index," as of any date, shall be the ratio of (i) the general level of prices for articles and services that farmers buy, wages paid hired farm labor, interest on farm indebtedness secured by farm real estate, and taxes on farm real estate, for the calendar month ending last before such date to (ii) the general level of such prices, wages, rates, and taxes during the period January 1910 to December 1914, inclusive.

(D) The prices and indices provided for herein, and the data used in computing them, shall be determined by the Secretary, whose determination shall be final.

(E) Notwithstanding the provisions of subparagraph (A), the transitional parity price for any agricultural commodity, computed as provided in this subparagraph, shall be used as the parity price for such commodity until such date after January 1, 1950, as such transitional parity price may be lower than the parity price, computed as provided in subparagraph (A), for such commodity. The transitional parity price for any agricultural commodity as of any date shall be—

(i) its parity price determined in the manner used prior to the effective date of the Agricultural Act of 1948 [January 1, 1950], less

(ii) five percent of the parity price so determined multiplied by the number of full calendar years (not counting 1956 in the case of basic agricultural commodities) which, as of such date, have elapsed after January 1, 1949, in the case of nonbasic agricultural commodities, and after January 1, 1955, in the case of the basic agricultural commodities.

Section 301 a (1) (F) outlines authority for the Secretary of Agriculture to make special adjustments in the method of computing parity prices for particular commodities if the method outlined in the act results in parity prices seriously out of line with those of other commodities.

Section 301 a (1) (G) relates to the use of the parity price computed in the manner used prior to the enactment of the Agricultural Act of 1949 for basic commodities through 1955, and is no longer applicable.

To summarize, parity prices are computed by both the old and the new formulas. The effective parity price—that is, the official parity price to be used for making determinations needed for price support or other programs—is then the higher of the following:

(1) The parity price computed under the new formula outlined in the amended act, and

(2) The transitional parity price (as described in paragraph (E)) until such time as the parity price computed under the new formula exceeds the transitional parity price. (During 1957 the transitional parity price for basic commodities is 95 percent of the parity price computed under the old formula and for nonbasic commodities is 60 percent of the old formula parity.)

The effective parity prices shown in this report are based on the provisions of the amended act. Briefly the actual method of computation under the new formula is as follows:

(a) The average of prices received by farmers for individual commodities for the 10 preceding years is calculated (for 1957 this is the 1947-56 average). An allowance for unredeemed loans and other supplemental payments resulting from price-support operations are included for those commodities for which applicable.

(b) This 10-year average is divided by the average of the index of prices received by farmers for the same 10 preceding calendar years, adjusted to include an allowance for unredeemed loans and other supplemental price support operations, to give an adjusted base price.

(c) Parity prices are computed by multiplying the adjusted base prices by the current parity index (the index of prices paid by farmers, including interest, taxes, and wage rates, with 1910-14=100). This index is published in *Agricultural Prices* each month.

For commodities still on the transitional parity, parity prices are also computed in the same manner as before January 1, 1950, the effective date of the amended act, i. e., according to the old formula. The methods of computation using the old formula were explained on pages 23-25 of *Agricultural Prices* for July 1949, "Parity and average prices received by farmers for agricultural commodities." These methods may be summarized as follows: (1) For commodities for which the base period price was computed from prices within the 1909-14 period, the base period price is multiplied by the index of prices paid by farmers including interest and taxes as computed prior to January 1950. (The use of the unrevised index was indicated by the conference report on the Agricultural Act of 1949, H. Rept. No. 1459, 81st Cong., 1st sess.) (2) For other commodities satisfactory price data were not available for the 1909-14 period. For most such commodities all or part of August 1919-July 1929, depending upon the availability of satisfactory data, was used as the base period. (For a few commodities satisfactory data were not available during the 1919-29 period and a more recent period was used.) For all these commodities the base period price is multiplied by the unrevised index of prices paid by farmers (excluding interest and taxes) converted to the appropriate base period. This conversion is made by dividing the index on the 1910-14 base by the applicable factor from the following table. The base price for avocados, for example, is the average of the seasons 1924-28, and the index for calculating the parity price as of any current date is obtained by dividing the current unrevised index of prices paid on the basis of 1910-14=100, by 1.54 to obtain the index on the base August 1924-July 1929=100.

Factors for converting the unrevised index of prices paid by farmers (as calculated prior to Jan. 1, 1950) from the 1910-14 base to a specified base period, United States

Base period	Crop seasons usually included ¹	Conversion factor
August 1919-July 1929	1919-28 and 1920-29	Divide by 1.59.
August 1924-July 1929	1924-28	Divide by 1.54.
August 1927-July 1929	1927-28	Divide by 1.53.

¹ The 1929 seasons are included for some crops for which the bulk of the harvest is marketed prior to Aug. 1. The average of these season average prices provide as satisfactory an estimate of the United States average prices for the specified base periods as is available.

Parity prices are calculated in terms of prices received by farmers in the local markets in which they ordinarily sell. This means that parity prices apply to the average of all classes and grades of the commodity as sold by all farmers in the United States, except as otherwise specified. Fruits and vegetables for fresh use and for processing are usually considered as separate commodities, and parity prices for fresh and processing categories are calculated for many of these crops. The Agricultural Marketing Agreement Act of 1937 provided for parity prices in certain areas for certain commodities covered by a marketing agreement or order program. Under the new legislation, United States parity prices with appropriate adjustments where needed may be used for the purpose of this act.

Where necessary in connection with a particular program, average or normal differentials for different varieties, classes, or grades of a commodity and average or normal spreads between different markets, methods of sale, or locations are calculated and applied to the national average support level or to the parity price. Differentials may also be established for seasonal differences, especially where there is a reasonably regular and well-defined seasonal movement. Such spreads or differentials, of course, need adjusting or recalculating from time to time due to changes in methods of processing, in marketing and transportation costs, and in the distribution of supplies relative to demand.

To facilitate comparison with parity prices, prices received by farmers for eggs, butterfat in cream, and wholesale milk are adjusted for seasonal variation. The index numbers used to adjust these monthly prices to an annual basis are published each year in the July issue of *Agricultural Prices*.

The indexes used in the computation of parity prices are published currently in *Agricultural Prices*. Tables showing the historical series of the index of prices paid by farmers, including interest, taxes, and wage rates annually from 1910 to 1956 and by months from 1923 to 1956 were included in Supplement No. 1 to *Agricultural Prices* for October 1956. Annual averages of the unrevised index of prices paid by farmers including interest and taxes (based on the formula and weights used prior to January 1950) and data by months for the period 1923-56 were also included in the supplement. The unrevised prices-paid index as computed prior to January 1950 was published in Supplement No. 1 to the January 1950 issue of *Agricultural Prices*. The prices-received index was revised in May 1956 to reflect revisions in the component price series for the period January 1953-March 1956. The entire series, January 1910-March 1956, together with a brief explanation, were included in Supplement No. 1 to the May 1956 issue of *Agricultural Prices*.

For the purpose of illustrating the computation of parity prices the calculation of the effective parity price for corn as of January 15, 1957, is given below. The parity price under the new formula of the amended act is computed as follows:

The 120-month (January 1947-December 1956) average of prices received by farmers for corn, adjusted to include an allowance for unredeemed loans, etc., was \$1.54 per bushel. The 120-month average of the index of prices received by farmers, adjusted to include an allowance for unredeemed loans, etc., was 265. Dividing \$1.54 by 265 gives \$0.581 per bushel, the adjusted base price. Multiplying this

adjusted base price by 292, the parity index for January 15, 1957, gives the indicated parity price of \$1.70 per bushel as computed using the new formula.

Since the effective parity for corn, a basic commodity, was the transitional parity in December 1956, it was also necessary to compute the transitional parity for January 15, 1957. As noted previously, the transitional parity for basic commodities during 1957 is 95 percent of the parity price computed by the old formula. The parity price according to the old formula is calculated by multiplying the average price received by farmers for corn for the 60 months, August 1909–July 1914, which was \$0.642 per bushel, by the January 15, 1957, unrevised index of prices paid, including interest and taxes, which is 296 percent. This gives an indicated parity price of \$1.90 per bushel under the old formula. Multiplying by 95 percent gives \$1.80, the transitional parity price. Since this is higher than the indicated parity price under the new formula of \$1.70 per bushel, the transitional parity price is the effective parity price for January 15, 1957.

Effective parity prices for most commodities have shifted to the new formula. For some commodities, however, the transitional parity is the effective parity price. The indicated parity prices computed by both the old and the new formulas, the transitional parity prices, and the effective parity prices are shown in the following table for the basic commodities and for nonbasic commodities that were still on the transitional basis in December 1956.

Indicated parity prices, "old," "transitional," and "new" for basic commodities and for nonbasic commodities for which the effective parity price was the transitional parity price on Dec. 15, 1956, and effective parity prices, United States, Jan. 15, 1957

Commodity	Unit	Old formula	Transitional parity prices ¹	New formula	Effective parity prices Jan. 15, 1957
Basic commodities:					
Cotton:					
American upland.....	Pound.....	\$0.3670	\$0.3486	\$0.3656	\$0.3656
Extra long staple.....	do.....			.785	.785
Wheat.....	Bushel.....	2.62	2.49	2.30	2.49
Rice.....	Hundredweight.....	5.36	5.09	5.09	5.69
Corn.....	Bushel.....	1.90	1.80	1.70	1.80
Peanuts.....	Pound.....	.142	.135	.121	.135
Tobacco:					
Flue-cured, types 11-14.....	do.....	.545	.518	.558	.558
Burley, type 31.....	do.....	.528	.502	.566	.566
Maryland, type 32.....	do.....	.547	.520	.526	.526
Dark air-cured, types 35-36.....	do.....	.203	.193	.327	.327
Puerto Rican filler, type 46.....	do.....	.376	.357	.304	.357
Nonbasic commodities:					
Grapefruit.....	Box.....	2.32	1.39	.847	1.39
Oranges.....	do.....	4.26	2.56	1.70	2.56
Avocados.....	Ton.....	1,030.00	618.00	333.00	618.00
Dates.....	do.....	594.00	356.00	128.00	356.00
Filberts.....	do.....	676.00	406.00	362.00	406.00
Walnuts.....	do.....	789.00	473.00	458.00	473.00

¹ For basic commodities 95 percent and nonbasic commodities 60 percent of the old formula parity.

Base data and effective parity prices, United States, Jan. 15, 1957

Commodity and unit	Adjusted base prices ¹	Effective parity prices, Jan. 15
Basic commodities:		
Cotton:		
American upland.....pounds..	² \$0.1252	\$0.3656
Extra long staple.....do.....	.269	.785
Wheat.....bushels.....	³ .884	⁴ 2.49
Rice.....hundredweight.....	³ 1.95	5.69
Corn.....bushels.....	³ .642	⁴ 1.80
Peanuts.....pounds.....	³ .048	⁴ .135
Tobacco:		
Flue-cured, types 11-14.....do.....	.191	.558
Fire-cured, types 21-24.....do.....	(⁵)	-----
Burley, type 31.....do.....	.194	.566
Maryland, type 32.....do.....	.180	.526
Dark air-cured, types 35-36.....do.....	.112	.327
Sun-cured, type 37.....do.....	(⁵)	-----
Pennsylvania seedleaf, type 41.....do.....	(⁵)	-----
Cigar filler and binder, types 42-44, 53-55 ²⁰do.....	(⁵)	-----
Puerto Rican filler, type 46.....do.....	⁷ .202	⁴ .357
Cigar binder, types 51-52 ²⁰do.....	(⁵)	-----
Designated nonbasic commodities:		
Tung nuts.....tons.....	27.10	79.10
Butterfat, in cream.....pounds.....	² .250	.730
All milk, wholesale.....hundredweight.....	² 1.63	4.76
Honey, wholesale:		
Comb.....pounds.....	⁸ .114	.333
Extracted.....do.....	⁸ .0521	.152
Wool and mohair:		
Wool.....do.....	.221	.645
Mohair.....do.....	.288	.841
Other nonbasic commodities:		
Field crops and miscellaneous commodities:		
Barley.....bushels.....	² .460	1.34
Beans, dry edible.....hundredweight.....	² 3.18	9.29
Broomcorn.....tons.....	128.00	374.00
Buckwheat.....bushels.....	² .479	1.40
Cottonseed.....tons.....	² 24.30	71.00
Crude pine gum.....barrels.....	² 9.70	28.30
Dry field peas.....hundredweight.....	1.77	5.17
Flaxseed.....bushels.....	² 1.54	4.50
Hay, all baled.....tons.....	² 8.42	24.60
Hops.....pounds.....	.205	.599
Oats.....bushels.....	² .296	.864
Peppermint oil.....pounds.....	2.12	6.19
Popcorn.....hundredweight.....	1.38	4.03
Potatoes.....do.....	² .830	2.42
Rye.....bushels.....	² .566	1.65
Sorghums for grain.....hundredweight.....	² .898	2.62
Soybeans.....bushel.....	² 1.02	2.98
Spearmint oil.....pound.....	1.75	5.11
Sweetpotatoes.....hundredweight.....	² 1.77	5.17
Tobacco:		
Cigar wrapper, type 61.....pound.....	(⁵)	-----
Cigar wrapper, type 62.....pound.....	(⁵)	-----
Fruits:		
Citrus:		
Grapefruit ⁹box.....	¹⁰ 1.25	⁴ 1.39
Lemons.....do.....	.936	2.73
Limes.....do.....	2.06	6.02
Oranges ⁹do.....	¹⁰ 2.29	⁴ 2.56
Deciduous and other:		
Apples:		
Primarily for fresh use.....bushel.....	² .977	2.85
For processing.....ton.....	14.90	43.50
Apricots:		
For fresh consumption.....do.....	54.70	160.00
Dried (California).....do.....	245.00	715.00
For processing (except dried).....do.....	32.20	94.00
Avocados ¹¹do.....	534.00	⁴ 618.00
Berries for processing (Washington, Oregon):		
Blackberries.....pound.....	.0415	.121
Boysenberries.....do.....	.0408	.119
Gooseberries.....do.....	.0365	.107
Loganberries.....do.....	.0385	.112
Raspberries, black.....do.....	.0808	.236
Raspberries, red.....do.....	.0634	.185
Youngberries.....do.....	.0408	.119

See footnotes at end of table, p. 57.

Base data and effective parity prices, United States, Jan. 15, 1957—Continued

Commodity and unit	Adjusted base prices ¹	Effective parity prices, Jan. 15
Other nonbasic commodities—Continued		
Fruits—Continued		
Deciduous and other—Continued		
Cherries:		
Sour.....ton.....	\$61.10	\$178.00
Sweet.....do.....	94.70	277.00
Cranberries.....barrel.....	4.75	13.90
Dates (California) ¹¹ton.....	¹² 309.60	⁴ 356.00
Figs:		
For fresh consumption (California) ¹¹do.....	60.40	176.00
Dried (California).....do.....	64.20	187.00
For processing (except dried).....do.....	41.50	121.00
Grapes:		
Raisins, dried (California).....do.....	63.40	185.00
Grapes, except raisins, dried.....do.....	17.70	51.70
Olives (California):		
Crushed for oil.....do.....	31.90	93.10
For processing (except crushed).....do.....	80.00	234.00
Peaches:		
For fresh consumption ¹³bushel.....	.898	2.62
Dried (California).....ton.....	135.00	394.00
For processing (except dried):		
Clingstone.....do.....	23.20	67.70
Freestone.....do.....	20.80	60.70
Pears:		
For fresh consumption ¹⁴bushel.....	.694	2.03
Dried (California).....ton.....	139.00	406.00
For processing (except dried).....do.....	26.80	78.30
Persimmons (California).....do.....	(5)	
Pineapples (Florida).....crate.....	2.02	5.90
Plums:		
For fresh consumption.....ton.....	61.90	181.00
For processing.....do.....	20.90	61.00
Pomegranates (California).....do.....	(5)	
Prunes:		
For fresh consumption.....do.....	36.20	106.00
Dried.....do.....	76.60	224.00
For processing (except dried).....do.....	18.40	53.70
Strawberries:		
For fresh consumption.....pound.....	.0830	.242
For processing.....do.....	.0642	.187
Seed crops:		
Alfalfa.....hundredweight.....	² 12.80	37.40
Alsike clover.....do.....	10.60	31.00
Austrian winter peas.....do.....	1.45	4.23
Bentgrass (Oregon).....do.....	22.40	65.40
Crested wheatgrass.....do.....	8.72	25.50
Crimson clover.....do.....	8.64	25.20
Fescue, chewings.....do.....	14.50	42.30
Fescue, creeping red.....do.....	15.40	45.00
Fescue, tall.....do.....	10.60	31.00
Ladino clover.....do.....	36.30	106.00
Lespedeza.....do.....	² 4.75	13.90
Orchardgrass.....do.....	6.42	18.70
Red clover.....do.....	² 13.80	40.30
Redtop.....do.....	14.30	41.80
Ryegrass, common (Oregon).....do.....	2.76	8.06
Ryegrass, perennial (Oregon).....do.....	4.19	12.20
Sudangrass.....do.....	2.54	7.42
Sweetclover.....do.....	4.11	12.00
Timothy.....do.....	² 4.72	13.80
Vetch, common.....do.....	2.45	7.15
Vetch, hairy.....do.....	5.43	15.90
Vetch, purple.....do.....	2.66	7.77
White clover.....do.....	22.90	66.90
Sugar crops:		
Maple sirup.....gallon.....	1.74	5.08
Maple sugar.....pound.....	.325	.949
Sorghum sirup.....gallon.....	¹⁵ .753	2.21
Sugar beets ¹⁶ton.....	5.17	15.10
Sugarcane for sugar.....do.....	¹⁶ 3.03	8.85
Sugarcane sirup.....gallon.....	¹⁷ .392	1.14
Tree nuts:		
Almonds.....ton.....	205.00	599.00
Filberts.....do.....	¹⁵ 350.00	⁴ 406.00
Pecans, all.....do.....	167.00	488.00
Walnuts.....do.....	¹⁰ 424.40	⁴ 473.00

See footnotes at end of table, p. 57.

Base data and effective parity prices, United States, Jan. 15, 1957—Continued

Commodity and unit	Adjusted base prices ¹	Effective parity prices, Jan. 15
Other nonbasic commodities—Continued		
Vegetables for fresh market:		
Artichokes (California)..... hundredweight..	\$3.38	\$9.87
Asparagus..... do.	4.98	14.50
Beans, lima..... do.	3.09	9.02
Beans, snap..... do.	3.09	9.02
Beets..... do.	.943	2.75
Cabbage..... do.	.717	2.09
Cantaloups..... do.	1.49	4.35
Carrots..... do.	1.17	3.42
Cauliflower..... do.	1.30	3.80
Celery..... do.	1.46	4.26
Corn, sweet..... do.	1.29	3.77
Cucumbers..... do.	1.88	5.49
Eggplant..... do.	1.83	5.34
Garlic..... do.	4.75	13.90
Kale (Virginia)..... do.	1.47	4.29
Lettuce..... do.	1.57	4.58
Onions..... do.	1.05	3.07
Peas..... do.	2.88	8.41
Peppers..... do.	3.13	9.14
Shallots..... do.	2.80	8.18
Spinach..... do.	2.06	6.02
Tomatoes..... do.	2.51	7.33
Watermelons..... do.	.513	1.50
Vegetables for processing:		
Asparagus..... ton.	77.40	226.00
Beans, lima ¹⁰ do.	55.50	162.00
Beans, snap..... do.	43.40	127.00
Beets..... do.	7.85	22.90
Cabbage..... do.	5.36	15.70
Corn, sweet..... do.	8.08	23.60
Cucumbers..... do.	23.10	67.50
Peas, green ¹⁰ do.	33.80	98.70
Spinach..... do.	16.30	47.60
Tomatoes..... do.	10.10	29.50
Livestock and livestock products:		
Beef cattle..... hundredweight.	⁸ 7.58	22.10
Beeswax..... pound.	.171	.499
Calves..... hundredweight.	² 8.34	24.40
All chickens..... pound.	² .0966	.282
Eggs..... dozen.	² 1.62	.473
Hogs..... hundredweight.	² 7.40	21.60
Lambs..... do.	² 8.42	24.60
Sheep..... do.	² 3.42	9.99
Turkeys..... pound.	² 1.26	.368

¹ Adjusted base price 1910-14 derived from 10 season average prices 1947-56 (including an allowance, where appropriate, for other supplemental payments resulting from price-support operations) by dividing by 265 percent (the 120-month, January 1947 to December 1956 average of the index of prices received by farmers adjusted to include an allowance for unredeemed loans and other supplementary payments) unless otherwise noted. Adjusted base prices are preliminary.

² Adjusted base price 1910-14 derived from 120-month, January 1947 to December 1956, average, including an allowance where appropriate for unredeemed loans and other supplemental payments resulting from price support operations.

³ 60-month average August 1909 to July 1914.

⁴ Transitional parity, basic commodities 95 percent and nonbasic commodities 60 percent (65 percent during 1956) of parity price computed under formula in use prior to Jan. 1, 1950.

⁵ Sufficient data not available at this time for estimating 1956 season average price needed for computation of parity price.

⁶ Adjusted base price 1910-14 derived from 10 weighted calendar year prices 1947-56.

⁷ 10-season average 1919-28, types 42-46 and 51-56.

⁸ Adjusted base price 1910-14 derived from 10 calendar year prices 1947-56.

⁹ Equivalent ontree returns for all methods of sale.

¹⁰ 10-season average 1919-28.

¹¹ Equivalent returns for bulk fruit at first delivery point.

¹² 5-season average 1924-28.

¹³ Based on prices for fresh use for important processing States and average prices for all methods of sale for other States.

¹⁴ Based on packinghouse-door returns for fresh consumption for Pacific Coast States, average prices for fresh use for Michigan, and average prices for all methods of sale for other States.

¹⁵ Dec. 1 prices.

¹⁶ Relates to prices including average conditional payments per ton made under the Sugar Acts of 1937 and 1948. Crop deficiency and abandonment payments not included.

¹⁷ Prices are Dec. 1 prices for all States except Louisiana which are season average prices.

¹⁸ 2-season average 1927-28; Oregon only.

¹⁹ Shelled basis.

²⁰ Cigar filler and binder, types 42-44 and 51-55 were formerly considered as one kind of tobacco for price support purposes. Beginning this month as determined by the Secretary of Agriculture, cigar filler and binder types 42-44 and 53-55 and cigar binder types 51-52, are considered as separate kinds of tobacco.

Prices received by farmers for agricultural commodities, annual averages for parity price computations, United States, 1947-56¹

Commodity and unit	1910-14=100										1947-56 average	
	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1946-55 average	For parity purposes ²
Index of prices received by farmers -----	276	287	250	258	302	288	258	249	236	236	264	265
CALENDAR YEAR AVERAGES ³												
Basic commodities:												
Cotton, American upland.....bushels	\$0.3240	\$0.3214	\$0.2909	\$0.3331	\$0.3968	\$0.3656	\$0.3158	\$0.3240	\$0.3217	\$0.3174	\$0.3275	\$0.3317
Wheat.....bushels	2.35	2.15	1.92	1.96	2.12	2.12	1.99	2.05	2.02	1.98	2.04	2.09
Rice.....hundredweight	5.53	6.10	4.53	4.80	5.19	5.53	6.05	4.69	4.52	4.51	4.50	5.17
Corn.....bushels	1.87	1.88	1.17	1.33	1.62	1.64	1.44	1.46	1.30	1.30	1.51	1.54
Peanuts.....pounds	.0982	.103	.104	.108	.107	.106	.110	.114	.122	.116	.106	.109
Tobacco, Maryland, type 32.....do	.443	.430	.543	.485	.480	.448	.491	.542	.392	.503	.482	.476
Designated nonbasic commodities:												
Butterfat, in cream.....pounds	.730	.786	.621	.622	.713	.752	.664	.589	.569	.584	.678	.663
All milk, wholesale, hundredweight	4.36	4.89	4.01	3.93	4.63	4.89	4.36	4.00	4.02	4.16	4.35	4.33
Other nonbasic commodities:												
Field crops and miscellaneous commodities:												
Barley.....bushel	1.59	1.50	1.03	1.12	1.27	1.36	1.20	1.08	.989	.958	1.24	1.22
Beans, dry, edible.....bushel	12.20	10.20	7.43	7.02	7.80	8.14	8.91	7.98	4.784	6.77	8.54	8.42
Buckwheat.....hundredweight	1.68	1.66	1.02	1.02	1.30	1.52	1.17	.928	1.13	1.32	1.29	1.27
Oatmeal.....bushel	83.20	82.50	47.60	62.50	85.90	66.80	88.90	55.30	50.40	50.10	65.50	64.50
Crude pine gum.....ton	30.60	28.30	21.00	22.20	31.00	24.60	24.40	27.00	27.00	26.50	26.00	25.70
Flaxseed.....bushel	6.34	3.85	4.22	3.44	3.33	3.77	3.49	3.31	2.88	3.10	4.13	4.07
Hay, all baled.....ton	21.40	23.40	22.50	21.10	22.30	24.60	22.60	22.30	21.50	21.00	22.10	22.30
Oats.....bushel	.956	.943	.656	.755	.861	.842	.747	.745	.661	.660	.794	.783
Rye.....do	2.42	1.81	1.23	1.26	1.57	1.71	1.33	1.12	1.00	1.08	1.53	1.50
Sorghums for grain.....do	2.84	2.79	1.97	1.87	2.19	2.71	2.43	2.27	2.00	2.00	2.35	2.38
Soybeans.....bushel	3.23	3.13	2.16	2.45	2.89	2.82	2.61	3.04	2.29	2.40	2.69	2.70
Sweetpotatoes.....hundredweight	4.12	4.15	4.57	3.54	4.22	7.08	6.19	4.54	4.60	3.96	4.73	4.70
Fruits: Apples, primarily for fresh use.....bushel	2.67	2.12	2.38	2.16	1.98	2.72	3.16	3.10	2.79	2.83	2.62	2.59
Seed crops:												
Alfalfa.....hundredweight	33.00	32.00	41.70	38.40	42.60	41.50	26.80	28.50	28.60	24.90	34.80	33.80
Lupinseed.....do	8.57	12.40	8.47	7.74	9.92	16.60	17.50	19.80	16.20	8.69	41.60	12.60
Red clover.....do	43.50	47.20	40.60	38.70	31.30	32.20	27.40	32.40	40.70	31.70	36.70	36.60
Timothy.....do	6.34	8.13	17.70	18.40	9.42	10.90	12.20	15.00	14.70	12.20	11.90	12.50

LIVESTOCK AND LIVESTOCK PRODUCTS:												
Beef cattle, hundred weight	18.50	22.40	19.90	23.10	28.80	24.80	16.60	16.00	15.70	20.00	20.10	---
Calves, hundred weight	20.30	24.40	23.00	26.00	32.10	27.20	17.60	16.70	16.80	21.90	22.10	---
All chickens, pound	28.2	32.4	27.2	2.48	2.73	2.64	2.55	2.13	2.36	2.65	2.86	---
Hens, hundred weight	24.20	28.30	18.30	3.69	4.19	4.19	21.60	21.90	15.40	19.80	19.60	---
Hogs, hundred weight	20.40	22.70	22.70	24.80	31.20	24.70	19.70	19.30	18.60	22.00	22.30	---
Lambs, hundred weight	8.41	9.60	9.45	11.40	16.30	10.60	6.93	6.24	5.99	9.26	9.06	---
Sheep, hundred weight	3.19	4.10	3.80	3.15	3.59	3.38	3.31	3.04	2.97	3.39	3.34	---
Turkeys, hundred weight	---	---	---	---	---	---	---	---	---	---	---	---
SEASON AVERAGE PRICES 7												
Basic commodities:	---	---	---	---	---	---	---	---	---	---	---	---
Cotton, extra long staple, pound	---	---	---	---	---	---	---	---	---	---	---	---
Tobacco:	---	---	---	---	---	---	---	---	---	---	---	---
Blue-cured, types 11-14, do	.610	.613	.568	.677	.994	1.04	.737	.652	.539	.655	.708	.713
Fire-cured, types 21-24, do	.412	.496	.472	.547	.524	.503	.528	.527	.527	.516	.505	.506
Burley, type 31, do	.295	.319	.298	.312	.400	.376	.338	.336	.373	(9)	(9)	---
Dark air-cured, types 35-36, do	.485	.460	.452	.490	.512	.503	.525	.498	.586	.636	.515	.515
Sun-cured, type 37, do	.256	.284	.278	.232	.343	.316	.252	.343	.318	.338	.285	.296
Pennsylvania seedleaf, type 41, do	.286	.320	.314	.339	.346	.316	.318	.322	.253	(9)	(9)	---
Cigar filler and binder, types 42-44, 53-55 1/2, do	.305	.263	.264	.264	.190	.252	.275	.274	.245	(9)	(9)	---
Cigar filler and binder, types 42-44, 53-55 1/2, do	.298	.229	.258	.243	.276	.263	.265	.280	.234	(9)	(9)	---
Puerto Rican filler, type 46 1/2, do	.250	.275	.270	.200	.280	.300	.320	.300	.305	.286	.275	---
Cigar binder, types 51-52 1/2, do	.622	.612	.474	.461	.473	.496	.508	.506	.404	(9)	(9)	---
Designated nonbasic commodities:	---	---	---	---	---	---	---	---	---	---	---	---
Tung nuts, ton	64.90	49.10	63.70	111.00	106.00	79.80	66.80	59.40	64.00	52.20	70.20	71.70
Honey, wholesale: 11	---	---	---	---	---	---	---	---	---	---	---	---
Comb, pound	.318	.304	.281	.292	.296	.300	.302	.302	.309	.318	.302	.302
Extracted, do	.220	.137	.111	.116	.119	.126	.129	.132	.143	.152	.144	.138
Wool and mohair:	---	---	---	---	---	---	---	---	---	---	---	---
Wool, do	.420	.492	.494	.621	4.971	.541	.549	.532	26.428	(9)	.547	(9)
Mohair, do	.536	.454	.463	.760	1.18	4.963	4.877	.724	.822	.840	.739	.702
Other nonbasic commodities:	---	---	---	---	---	---	---	---	---	---	---	---
Field crops and miscellaneous commodities:	---	---	---	---	---	---	---	---	---	---	---	---
Beeswax 11, pound	.438	.432	.376	.428	.504	.431	.410	.441	.512	.546	.452	---
Broomcorn, ton	300.00	308.00	214.00	368.00	436.00	403.00	334.00	306.00	223.00	445.00	324.00	340.00
Dry field peas, hundred weight	5.37	4.94	3.32	3.56	4.11	5.26	5.11	5.03	413.5.28	13.4.76	4.71	4.69
Hops, pound	.684	.555	.570	.621	6.63	5.75	4.47	.406	.407	.430	.562	.543
Peppermint oil, do	6.94	6.20	4.72	5.31	6.92	5.75	4.37	4.532	4.583	5.16	4.5.73	5.61
Popcorn, hundred weight	4.73	4.33	3.23	3.16	4.34	4.44	3.68	2.93	4.3.07	3.74	3.66	---
Potatoes, do	2.67	2.53	4.2.10	1.50	4.2.68	4.3.21	4.1.31	4.2.15	4.1.77	2.12	2.19	2.20
Spearment oil, pound	5.57	4.31	3.20	3.68	5.08	6.88	5.43	4.8.85	4.22	4.07	4.78	4.63
Tobacco:	---	---	---	---	---	---	---	---	---	---	---	---
Cigar wrapper, type 61, do	3.10	2.90	2.05	2.05	2.05	2.10	2.05	2.15	4.2.15	(9)	4.2.06	(9)
Cigar wrapper, type 62, do	2.65	2.45	1.95	2.00	1.80	1.80	1.95	1.95	4.1.85	(9)	---	---

See footnotes on page 64.

Prices received by farmers for agricultural commodities, annual averages for parity price computations, United States, 1947-56—Continued

Commodity and unit	1910-14=100										1947-56 average	
	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1946-55 average	For parity purposes ²
[SEASON AVERAGE PRICES ¹ —continued												
Other nonbasic commodities—Con.												
Fruits:												
Citrus:												
Grapefruit ¹⁴box	\$0.33	\$0.65	\$1.63	\$0.90	\$0.58	\$0.80	\$0.57	\$0.71	\$0.66	\$0.85	\$0.751	\$0.768
Lemons ¹⁴do	1.87	3.51	2.86	2.08	2.68	3.11	2.00	41.99	42.47	2.20	42.46	2.48
Limes (Florida).....do	5.62	5.10	5.58	4.29	5.60	5.84	7.16	4.93	44.89	5.45	45.49	5.45
Oranges ¹⁴do	1.00	1.45	1.92	1.66	1.13	1.34	1.55	41.56	42.01	1.83	41.49	1.54
Deciduous and other:												
Apples for processing...tons	29.90	31.80	22.80	34.50	24.40	44.50	65.30	53.20	35.30	53.60	39.10	39.50
Apriots:												
For fresh consumption												
Dried (California) do	121.00	89.90	72.00	150.00	4153.00	4159.00	186.00	176.00	140.00	204.00	139.00	145.00
For process (extra dried)	480.00	418.00	405.00	627.00	616.00	726.00	732.00	820.00	688.00	891.00	620.00	649.00
Avocados.....do	72.50	56.40	50.90	68.00	115.00	93.30	93.80	102.00	88.60	114.00	83.70	85.40
Berries for processing (Washington-Oregon):	378.00	361.00	373.00	302.00	239.00	286.00	282.00	190.00	4284.00	328.00	4308.00	302.00
Blackberries.....pounds	.091	.080	.089	.140	.156	.098	.099	.091	.101	.152	.111	.110
Boysenberries.....do	.084	.114	.067	.088	.137	.123	.145	.118	.082	.120	.161	.108
Gooseberries.....do	.041	.067	.069	.096	.115	.109	.126	.124	.087	.0874	.087	.0867
Loganberries.....do	.083	.121	.072	.090	.130	.101	.098	.097	.085	.140	.110	.102
Raspberries, black do	.210	.213	.194	.198	.132	.145	.258	.314	.211	.240	.217	.214
Raspberries, red do	.173	.142	.129	.160	.177	.180	.219	.166	.112	.217	.176	.168
Youngberries.....do	.082	.114	.066	.088	.137	.123	.145	.118	.082	.120	.116	.108
Cherries:												
Sour.....tons	198.00	183.00	188.00	130.00	4137.00	4123.00	182.00	209.00	118.00	157.00	177.00	162.00
Sweet.....do	257.00	278.00	156.00	238.00	297.00	4210.00	274.00	291.00	217.00	295.00	250.00	251.00
Cranberries.....barrels	17.10	10.10	9.34	9.45	14.50	18.80	14.50	11.60	49.81	11.20	14.70	12.60
Dates (California).....tons	81.00	110.00	153.00	184.00	105.00	100.00	130.00	94.00	4106.00	88.00	4125.00	116.00
Figs:												
For fresh consumption (California) do	168.00	116.00	128.00	153.00	215.00	206.00	154.00	119.00	161.00	179.00	163.00	160.00
Dried (California) do	123.00	139.00	170.00	283.00	196.00	143.00	156.00	166.00	205.00	122.00	186.00	170.00

For processing (extra dried).....do	109.00	93.10	83.50	123.00	148.00	135.00	100.00	105.00	105.00	102.00	113.00	110.00
Grapes.....do												
Raisins, dried (California).....do	132.00	134.00	135.00	261.00	167.00	4156.00	4159.00	4175.00	4172.00	191.00	4180.00	168.00
Grapes, excluding raisins, dried.....do	43.70	40.70	37.00	68.60	38.90	439.60	62.00	53.40	442.50	53.00	451.50	46.90
Olives (California).....do	121.00	118.00	70.00	106.00	65.00	68.00	74.00	64.00	484.00	75.00	498.60	84.50
Crushed for oil.....ton	178.00	183.00	227.00	269.00	230.00	127.00	226.00	197.00	261.00	221.00	234.00	212.00
For processing (except crushed).....ton												
Peaches.....do												
For fresh consumption ¹⁸bushel	1.99	2.41	1.85	2.57	2.31	42.37	2.42	2.57	2.71	2.60	2.38	2.38
Dried (California).....ton	195.00	301.00	268.00	395.00	318.00	396.00	376.00	375.00	421.00	542.00	338.00	359.00
For processing (except dried).....ton												
Olingstone, (California).....ton	49.70	63.30	40.00	60.00	77.40	65.00	54.70	54.60	80.60	69.50	60.90	61.50
Freestone.....do	50.00	57.00	33.70	461.00	62.70	55.30	52.70	53.10	62.90	61.20	55.40	55.00
Pears.....do												
For fresh consumption ¹⁷bushel	1.70	1.88	41.06	41.87	42.09	41.79	41.83	2.07	1.98	2.12	1.85	1.84
Dried (California).....ton	275.00	385.00	252.00	380.00	352.00	340.00	362.00	577.00	385.00	308.00	367.00	368.00
For processing (except dried).....ton	72.70	112.00	29.90	77.40	95.80	45.30	62.50	70.30	68.00	75.10	72.40	70.90
Persimmons (California).....ton	83.00	83.00	38.00	76.00	93.00	69.00	128.00	116.00	129.00	(⁹)	90.30	(⁹)
Pineapples (Florida).....box	4.75	5.00	4.80	4.50	5.70	6.50	6.00	5.40	6.20	4.50	3.84	5.34
Plums.....do												
For fresh consumption.....ton	158.00	148.00	4104.00	4178.00	146.00	233.00	160.00	180.00	177.00	149.00	163.00	164.00
For processing.....do	44.60	58.10	42.50	54.50	65.70	61.50	56.60	61.50	55.00	53.40	53.90	55.30
Pomegranates (California).....ton	44.00	36.00	28.00	58.00	64.00	66.00	81.00	70.00	84.00	(⁹)	59.30	(⁹)
Prunes.....do												
For fresh consumption.....ton	86.50	74.70	50.40	124.00	490.90	494.00	493.30	148.00	477.70	120.00	495.20	96.00
Dried.....do	148.00	152.00	166.00	245.00	172.00	233.00	222.00	217.00	476.00	196.00	209.00	203.00
For processing (except dried).....ton	57.60	39.00	20.80	96.20	49.80	50.00	41.60	46.40	40.50	45.30	50.70	48.80
Strawberries.....do												
For fresh consumption ¹⁸pound	.216	.237	.221	.210	.194	.208	.221	.236	.244	.216	.225	.220
For processing.....do	.183	.201	.151	.207	.168	.159	.165	.158	.167	.146	.183	.170
Seed crops.....do												
Alsike clover.....hundredweight	31.90	27.80	28.80	33.70	35.80	26.90	16.30	27.70	13421.00	1332.20	28.10	28.20
Austrian winter peas.....do	4.83	6.01	4.36	4.47	3.61	3.11	2.65	2.61	43.32	3.29	43.84	3.83
Benigrass (Oregon).....do	39.50	58.70	63.70	67.50	81.40	52.80	61.10	54.90	446.10	47.20	62.70	63.30
Crested wheatgrass.....do	15.90	27.20	24.40	15.60	25.60	34.00	14.90	17.00	421.40	34.40	421.00	23.10

See footnotes on page 64.

Prices received by farmers for agricultural commodities, annual averages for parity price computations, United States, 1947-56¹—Continued

Commodity and unit	1910-14=100											1947-56 average	
	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1946-55 average	As com- puted	For parity pur- poses ¹
SEASON AVERAGE PRICES ¹ —continued													
Other nonbasic commodities—Continued													
Seed crops—Continued													
Crimson clover ¹³do.....	\$18.30	\$23.00	\$20.70	\$32.70	\$27.80	\$21.10	\$15.80	\$19.60	\$23.90	\$26.40	\$22.00	\$22.90	-----
Fescue, Cheviings ¹³do.....	29.50	36.50	33.90	49.70	66.50	47.00	43.00	25.00	419.00	34.00	439.90	38.40	-----
Fescue, creeping red ¹³do.....	31.50	40.50	39.20	51.80	69.30	48.30	42.50	25.50	423.30	39.70	441.90	40.90	-----
Fescue, tall ¹³do.....	29.50	41.20	43.50	40.20	50.90	25.40	12.50	15.30	419.17	13.50	30.50	28.10	-----
Ladino clover ¹³do.....	161.00	167.00	129.00	119.00	108.00	91.50	33.20	51.80	453.30	49.10	104.00	96.30	-----
Orchardgrass ¹³do.....	9.77	15.30	18.20	17.80	15.60	16.60	13.40	26.20	415.50	21.70	415.90	17.00	-----
Redtop ¹³do.....	13.20	41.30	42.00	34.30	23.30	37.70	51.20	56.20	436.10	42.90	435.20	37.80	-----
Ryegrass, common (Oregon) ¹³do.....	5.95	7.80	9.70	7.50	9.00	6.70	8.90	7.00	45.60	5.00	47.56	7.32	-----
Ryegrass, perennial (Oregon) ¹³do.....	9.40	10.70	13.30	12.50	13.60	9.40	11.60	13.00	49.40	8.40	41.70	11.10	-----
Sudanagrass ¹³do.....	6.27	5.68	5.37	7.34	7.06	10.50	5.20	8.99	44.57	6.24	6.85	6.72	-----
Sweetclover.....do.....	10.60	13.70	14.70	11.70	9.70	9.24	9.21	11.10	1349.53	139.48	11.00	10.90	-----
Vetch, common ¹³do.....	6.10	8.02	8.81	6.40	6.45	3.51	4.17	4.84	6.00	8.47	6.23	6.48	-----
Vetch, hairy ¹³do.....	16.50	18.20	16.10	15.10	14.90	13.50	11.50	11.20	13.30	14.10	14.40	14.40	-----
Vetch, purple ¹³do.....	7.68	8.97	8.50	6.01	8.00	6.20	5.20	4.50	9.00	6.50	7.13	7.06	-----
White clover ¹³do.....	42.10	65.50	78.20	80.10	54.90	48.30	45.30	66.10	458.70	68.60	460.20	60.80	-----
Sugar crops:													
Maple sirup.....gallon.....	5.19	4.78	4.46	4.12	4.22	4.41	4.73	4.66	1344.68	134.80	44.45	4.60	-----
Maple sugar.....pound.....	.852	.830	.818	.769	.793	.858	.911	.853	134.934	13.990	4.828	.861	-----
Sorghum sirup ¹⁹gallon.....	1.78	1.71	1.77	1.80	1.99	2.26	2.26	2.27	132.11	132.18	2.01	2.01	-----
Sugar beets ²⁰ton.....	14.24	13.01	13.27	13.61	14.10	14.35	13.94	13.11	413.51	14.13	413.70	13.70	-----
Sugarcane, for sugar ²⁰do.....	8.34	6.86	7.38	9.01	7.38	8.08	8.44	8.12	47.61	9.21	47.90	8.04	-----
Sugarcane, sirup ²¹gallon.....	1.08	.944	.865	.955	1.07	1.12	1.10	1.06	1341.11	131.13	1.08	1.04	-----
Tree nuts:													
Almonds.....ton.....	558.00	422.00	330.00	546.00	472.00	464.00	476.00	498.00	861.00	805.00	511.00	543.00	-----
Filberts.....do.....	252.00	259.00	219.00	350.00	351.00	4298.00	344.00	320.00	420.00	470.00	320.00	328.00	-----
Pecans, all.....do.....	446.00	244.00	376.00	4576.00	4394.00	4442.00	4326.00	572.00	4656.00	384.00	4471.00	442.00	-----
Walnuts.....do.....	382.00	419.00	351.00	385.00	429.00	396.00	412.00	350.00	4552.00	486.00	4423.00	416.00	-----

Vegetables for fresh market: 23

Artichokes (California)	hundredweight	8.75	10.10	9.75	10.00	8.75	9.00	7.60	8.50	9.60	8.93	8.96
Asparagus	do	12.40	12.10	12.90	14.10	13.50	12.90	13.60	15.00	14.30	13.00	13.20
Beans, lima	do	7.91	7.99	8.67	8.00	9.18	8.77	8.64	7.91	8.79	8.30	8.20
Beans, snap	do	7.20	7.34	7.53	8.13	9.23	9.08	8.97	7.05	8.70	8.06	8.18
Beets	do	2.15	2.20	2.21	2.78	3.10	2.76	2.65	2.56	2.72	2.40	2.50
Cabbage	do	2.15	1.60	1.33	2.58	2.92	1.57	1.45	2.24	1.60	1.89	1.90
Cantaloupes	do	3.88	3.27	3.68	3.83	4.44	4.31	4.01	3.18	2.22	3.90	3.95
Carrots	do	3.30	3.42	2.48	3.60	3.05	3.22	3.20	3.62	2.70	3.09	3.10
Cauliflower	do	3.89	3.07	3.13	3.62	3.64	3.12	3.31	3.95	3.28	3.47	3.44
Celery	do	5.18	4.03	3.69	3.82	4.06	3.61	3.31	3.21	3.77	3.87	3.86
Corn, sweet #1	do	2.51	2.99	3.28	3.49	3.72	3.97	3.63	3.21	3.77	3.38	3.43
Cucumbers	do	4.56	4.40	4.75	4.89	5.47	5.73	4.73	4.62	5.55	4.93	4.97
Cucumbers	do	5.76	4.03	4.64	5.53	4.86	4.86	4.84	4.27	5.40	4.78	4.86
Eggplant	do	5.76	4.03	4.64	5.53	4.86	4.86	4.84	4.27	5.40	4.78	4.86
Garlic	do	9.81	9.96	8.48	8.49	16.00	16.00	13.00	11.45	13.40	12.60	12.60
Kale (Virginia)	do	3.33	2.80	2.80	4.70	5.30	2.80	3.05	4.45	3.99	3.98	3.89
Lettuce	do	4.25	4.84	3.48	4.44	4.13	4.00	4.03	5.34	3.99	4.10	4.15
Onions	do	4.16	2.94	1.75	3.34	4.62	1.37	2.14	5.37	2.61	2.71	2.79
Peas, green	do	7.20	7.08	7.18	7.36	6.77	8.28	8.17	8.11	8.86	7.43	7.63
Peppers, green	do	9.75	7.41	8.11	8.56	9.94	8.95	7.50	5.08	8.78	8.13	8.29
Shallots (Louisiana)	do	8.01	6.99	5.57	5.43	6.01	4.93	4.22	5.47	6.18	5.25	5.45
Spinach	do	4.55	4.97	5.57	5.43	6.01	5.73	5.73	6.17	5.08	6.41	6.66
Tomatoes	do	6.02	5.88	6.41	6.83	7.57	7.06	6.57	6.75	7.99	6.41	6.66
Watermelons	do	1.15	1.15	1.22	1.38	1.73	1.55	1.15	1.29	1.43	1.36	1.36
Vegetables for processing: 24												
Asparagus	ton	143.00	180.00	211.00	243.00	208.00	203.00	226.00	246.00	226.00	202.00	205.00
Beans, lima #1	do	142.00	146.00	136.00	146.00	148.00	153.00	149.00	143.00	150.00	145.00	147.00
Beans, snap	do	104.00	112.00	106.00	114.00	121.00	125.00	119.00	111.00	120.00	115.00	115.00
Beets	do	19.90	20.60	20.80	21.10	21.70	20.10	20.60	20.60	19.50	20.70	20.80
Cabbage	do	17.20	12.40	9.60	12.60	19.90	13.40	12.00	18.20	12.10	14.30	14.20
Corn, sweet	do	23.20	20.30	18.00	23.20	23.90	23.40	20.70	19.50	20.60	21.70	21.40
Cucumbers	do	20.70	59.60	67.70	64.50	64.80	64.50	59.20	54.20	55.00	61.70	61.30
Peas, green #1	do	56.20	88.30	89.60	88.60	90.50	93.60	92.20	89.80	92.40	88.90	89.50
Spinach	do	46.20	41.40	44.90	47.30	45.90	43.70	39.60	43.50	40.00	43.90	43.10
Tomatoes	do	23.70	23.90	25.30	31.40	29.10	27.30	24.30	24.90	25.60	27.40	26.80

See footnotes on page 64.

- ¹ Averages used to compute "adjusted base prices." Revisions made subsequent to computing the "adjusted base prices" used during 1956 are indicated by footnotes. 1956 and 1947-56 averages are preliminary.
- ² Includes an allowance for price-support operations as authorized by the Secretary of Agriculture Jan. 30, 1956. This item is omitted for commodities not affected by the adjustment.
- ³ Simple average of monthly prices. Due to rounding differences, the 10-year average of these data might differ slightly from the 120-month averages shown in the 1946-55 and 1947-56 columns.
- ⁴ Revised.
- ⁵ The adjustment for parity purposes results from excluding peanuts produced for oil under the special programs in effect in 1950 and 1951.
- ⁶ Weighted calendar-year averages.
- ⁷ Unless otherwise noted these prices are averages for the marketing season computed by weighting State prices by quantities sold, or by production for those commodities for which virtually all of the production is sold.
- ⁸ Average price to Feb. 1, 1957.
- ⁹ Not available.
- ¹⁰ Prepared by Tobacco Divisions, Agricultural Marketing Service and Commodity Stabilization Service. Price for year harvested.
- ¹¹ Average for calendar year. State prices weighted by production to compute United States average.
- ¹² Incentive level of 62 cents per pound in 1955 and 1956 marketing years were used in computing this average.
- ¹³ State prices weighted by production.
- ¹⁴ Equivalent on-free returns for all methods of sale.

- ¹⁵ Equivalent returns for bulk fruit at first delivery point.
- ¹⁶ Prices for fresh use for important processing States and average prices for all methods of sale for other States.
- ¹⁷ Packinghouse-door returns for fresh consumption for Pacific Coast States, average prices for fresh use for Michigan, and average prices for all methods of sale for other States.
- ¹⁸ Includes strawberries for processing in States where processing crop is not estimated separately.
- ¹⁹ Dec. 1 prices.
- ²⁰ Prices include average conditional payments per ton made under the Sugar Acts of 1937 and 1948. Crop deficiency and abandonment payments not included.
- ²¹ Prices are Dec. 1 prices for all States except Louisiana which is a season average price.
- ²² Prices rounded to three significant figures. Fresh market prices for all vegetables except garlic and shallots converted to hundredweight basis in connection with census revisions, 1949-54. Cucumbers for processing converted from bushel to ton basis with this report.
- ²³ New Jersey, New York, and Pennsylvania in 1947, Massachusetts added in 1948, and 22 remaining States in 1949.
- ²⁴ Shelled basis.
- ²⁵ Cigar filler and binder, types 42-44 and 51-55 were formerly considered as one kind of tobacco for price-support purposes. Beginning this month, as determined by the Secretary of Agriculture, cigar filler and binder, types 42-44 and 53-55 and cigar binder, types 51-52, are considered as separate kinds of tobacco.
- ²⁶ Average local market price for wool sold; does not include incentive payment to bring season average return to 62 cents per pound.

